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# EPA AUTHORITY AFFECTING LAND USE

Ross, Hardies, O'Keefe, Babcock and Parsons

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This study examines existing EPA statutory and regulatory authority which involve land use requirements or implications. There is a direct relationship between land use control measures and environmental impacts. Many pollution problems can be prevented by implementing land use controls with proper consideration of environmental impact. The study is designed to highlight issues which confront EPA regulatory efforts. It includes an analysis of land use impact of programs implemented under the Clean Air Act, the Marine Protection Research and Sanctuaries Act, the Noise Control Act, and the Solid Waste Disposal Act. Those authorities are set forth in the context of influence on land use making process. The discussion emphasizes state and local responsibility. The study concludes with a section on existing methods to coordinate agency programs having significant implication for land use decisions including NEPA, the A-95 clearinghouse process, and the IGA program (Integrated Grants Administration).

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# EPA AUTHORITY AFFECTING LAND USE

PREPARED FOR OFFICE OF PLANNING
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UNDER CONTRACT NO. 68-01-1560.

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# SUMMARY OF REPORT

## I. INTRODUCTION

The purpose of this report is to provide an independent evaluation of the legislative basis for the involvement of the United States Environmental Protection Agency (hereinafter referred to as "EPA") with the land use decision making and control processes of the various states. Ways are suggested by which EPA can more effectively use land use control measures where necessary to achieve EPA's statutory goals.

In its broadest terms, land use is the carrying out of an activity or operation in, on, over or under a parcel of land. Land use traditionally has been controlled by a wide variety of direct and indirect control systems of federal state and local governments. These include such obvious direct systems as local zoning, subdivision, public health, building and annexation controls and such equally important and indirect systems as real estate property taxation and state and federal highway and housing policies.

In recent years these traditional systems have been augmented by new programs to control the use of land on a state and regional basis. For the most part the new systems do not replace but merely supplement the traditional systems of control, thereby adding to the complexity of the control network. In addition, of recent origin are statutes designed to control air and water pollution and to regulate noise and the disposal of solid waste materials. Each of these programs administered by EPA have significant impact, both direct and indirect, on land use patterns.

The general nature of the impact of these five major pollution control acts on land use patterns is described in Chapter II of this report. EPA's authority under these acts to exercise or to require state and local agencies to exercise land use controls in the implementation of the various environmental protection responsibilities is described in Chapters III through V together with suggestions for types of land use programs which might be useful in attaining environmental objectives and procedures for implementing such programs. While it is not the objective of this report to reach definitive conclusions regarding the extent to which any particular land use program might achieve statutory goals better than other regulatory techniques, some evaluation of the relative merits of one land use program as against others is included.

EPA's statutory authority provides some flexibility to EPA to establish mechanisms for achieving the objectives of the various programs. Since it is clear Congress intended state and local government to be a substantial partner in the problem of environmental protection, Chapter VI explores the relationship of EPA with state and local environmental and land use control agencies. The question of which agency determines which policy or mechanism shall be implemented at a particular point in time is central to each program.

While Chapter II examines some of the impact these programs can have on the use of land and society, Chapter VII examines the interrelationship between the various programs as they impact on land use and how one program can have an impact on the implementation of another program. Many of EPA's programs and the state implementation plans are still in the formative stage so it is difficult to accurately judge what the eventual impact and interrelationship of these programs will be as they relate to land use. However, some hypothetical examples based on experience to date will illustrate some of the problems of trying to implement a number of pollution control programs without appropriate coordination.

Chapter VIII examines existing methods that are available for attempting to coordinate government policies to find the optimum solution to the problems and conflicts posed by uncoordinated environmental control programs.

It examines a variety of planning and management techniques and concludes that while there are significant benefits to be derived from these techniques, their ability to provide the necessary coordination is quite limited.

Chapter IX suggests methods by which EPA could encourage states to undertake comprehensive systems of planning and regulations of land use that will help achieve EPA goals in a manner consistent with other governmental policies.

## II. LAND USE IMPACT OF EPA RESPONSIBILITIES FOR CONTROL OF POLLUTION

The Environmental Protection Agency has been charged with the implementation of the Clean Air Act and the Water Pollution Control Act and a growing number of other programs designed to control pollution in the form of ocean dumping, noise, solid waste disposal and pesticides. The various statutes under which EPA operates were enacted at different times, each designed to remedy a single and separate category of environmental damage. Each of the statutes significantly affects the way land is used. But none of the statutes specifically provides a mechanism to coordinate its enforcement and implementation with other environmental standards and policies for which EPA is responsible.

However, environmental problems tend to be interrelated with one another through a complex network of ecological connections. The more this network is understood the more difficult it becomes to find a simple solution to any single environmental problem without threatening new problems in another sector.

EPA was created in an effort to integrate the functions and activities of these various programs to avoid the fragmentation which then existed. Nowhere is the complex network of interrelationships more apparent than in an examination of the land use impacts of various EPA programs.

Under the Clean Air Act development of new sources in urban areas which do not meet national ambient air quality standards may be limited even though the sources themselves meet applicable standards of performance. Furthermore, location of new sources in rural and other areas of the United States where air quality is substantially better than the national standards may be inhibited by application of standards designed to prevent significant deterioration of existing air quality. Thus, development of new sources is likely to be concentrated on the fringes of urban areas where air quality improves as air quality in the adjoining urban areas improves. Concentration of development in such bands will be further complicated by the need to deal with complex or indirect sources and the accumulation of automobile exhausts which accompany such developments.

Implementation of performance standards for new sources will create problems in other media as utilization of technological controls over emissions is likely to result in the accumulation of large quantities of material such as sulfur, sulfuric acid, flyash and other solid materials which will have to be disposed of in some manner consistent with Water Pollution Control Act or Solid Waste Disposal Act programs.

As under the Clean Air Act, new pollution sources are likely to be banned under the Water Pollution Control Act even where the best available pollution control technology is used if the sources would interfere with attainment of applicable water quality standards. This means development in many urban areas will be severely limited. Development in areas where water quality is clean may also be inhibited where existing pollution control technology would be inadequate to prevent degradation of existing water quality.

Permits under the National Pollutant Discharge Elimination System ("NPDES") may be conditioned to assure compliance with applicable water quality standards and effluent limitations. Conditions with respect to publicly owned waste treatment plants may include requirements that growth and development controls be adopted or utilized. Where any such conditions are violated, court action may be taken to prohibit any further introduction of pollutants into publicly owned waste treatment plants. This will effectively place a limit on the amount of development which a particular waste treatment plant can serve with the potential of effectively permitting EPA to determine the quantity and possibly the type of development which may take place in a given area.

Water Act standards affect not only point discharges of effluents into waters but also the so-called "nonpoint" sources such as farming, mining, timber cutting and other activities or developments which may result in large accumulations of waste waters which may drain off the land into adjacent surface waters or underlying ground waters.

The Marine Protection, Research and Sanctuaries Act of 1972 will require many municipalities along ocean coasts to re-examine their practices for disposing of wastes. Utilization of alternatives such as sanitary landfills or other techniques on land may be required in place of ocean dumping.

Although much of the Noise Control Act is directed at the technology for reducing noise emissions from machinery and products or interstate transportation equipment, the Act will have an impact on land use particularly with respect to the location of airports and types of developments surrounding airports. In addition, Noise Act guidelines with respect to noise levels may influence the routing of highways and mass transit facilities and other heavy noise emitting industries away from the fringes of population concentrations.

Solid Waste Disposal Act guidelines will encourage location of solid waste disposal facilities at places where such matters as geology and soil conditions will be appropriate for waste disposal rather than to sites which are simply convenient repositories for waste materials. This may lead to substantial changes in waste disposal practices of communities.

## III. EPA AUTHORITY TO IMPOSE LAND USE CONTROL REQUIREMENTS UNDER THE CLEAN AIR ACT

Because of the inadequate response of state and local governments to protect and preserve air quality under previous air quality legislation, the Clean Air Act Amendments of 1970 were adopted significantly increasing the extent of federal authority in the control of air pollution. In general, the fight against air pollution under the 1970 amendments was to be undertaken by establishing national ambient air quality standards necessary to protect the public health and welfare, establishing national standards of performance against which emission of pollutants into the atmosphere could be measured, requiring states to devise plans and programs by which the air quality standards would be administered and enforced, and providing funds for research and for programs to implement Clean Air Act standards and objectives. Land use mechanisms may be useful in implementation of the standards and objectives of the Clean Air Act.

Grants for planning and control programs under the Clean Air Act may be made on such terms and conditions as EPA deems necessary and thus EPA may require air pollution control agencies seeking grants to study the possible application of land use control mechanisms and/or the coordination of air pollution control agencies with other state and local agencies dealing with matters of land use planning and control. However, as the grant program is a voluntary program, efforts to impose conditions which are too restrictive or unfavorable may result in agencies declining to use federal funds. Thus, it does not appear the grant program can be effectively used to foster direct land use control programs.

State Air Quality Implementation Plans. EPA is charged with establishing two types of national ambient quality standards: the national primary air quality standard (the attainment and maintenance of which is necessary to protect the public health), and the national secondary ambient air quality standard (the attainment and maintenance of which is "requisite to protect the public welfare from any known or anticipated adverse effects associated with presence of such air pollution in the ambient air.") EPA is also required to protect against "significant deterioration" of existing air quality where that air quality is cleaner than the minimum prescribed by the national standards.

Implementation of the national standards is to be undertaken by states which are to prepare implementation plans to be approved by EPA. Plans may contain land use controls "as may be necessary" to achieve objectives of the Act. Among other things, these plans must also take into consideration appropriate regulations for control of indirect or complex sources. Regulations promulgated by EPA require that state implementation plans also contain control strategies to guarantee that growth and development in areas identified as having a potential for exceeding any national standard within the next ten years will not cause air pollution levels to exceed the national standards. The legislative history of the Act is clear that land use controls were an element Congress expected to be utilized in achieving air quality standards. Possible land use control mechanisms which might be utilized in implementation plans include the following:

1. The establishment of more narrowly defined air quality control regions or districts taking into consideration such factors as existing land uses, meteorological conditions, topography, population concentrations and other factors.

2. Implementation of the concept of "emission density zoning" whereby various parcels of land are assigned allowable levels of pollution density. Development which cannot meet the allowable pollution density limits would not be permitted. Emission rights could be transferrable from one parcel to another.

3. Locational controls applicable to particular kinds of sources which would coordinate performance standards for particular sources developed under the Act with the state implementation plans. Sources subject to such standards could be encouraged to locate near types of development which would be less affected by emissions, or to scatter in particular directions because of proximity to transportation networks, related industries or meteorological or topographical conditions.

4. A permit procedure with respect to all new sources. The agency could issue permits on a first-come, first-served basis until application of national air quality standards prohibited introduction of further pollutants or the control agency could undertake some degree of planning so that permitted new sources are related to the anticipated needs of the community.

Permits could also be conditioned to require the operator of a source to comply with all applicable pollution control requirements under the Clean Air Act or other acts in disposing of any materials accumulated through application of air pollution control technologies.

Performance Standards for New and Existing Stationary and Hazardous Sources. EPA is to develop standards of performance and emission limitations for new stationary sources and sources of hazardous air pollutants. States may develop programs for implementing and enforcing such standards which normally will include use of a permit system.

EPA's current regulations for controlling emissions deal generally with the removal of pollutants or limitation of the amount of pollutants emitted into the atmosphere. These regulations can have an impact on land use as they may determine that a particular source may or may not be built. However, factors affecting the location of particular sources may also be worthy of consideration as differences in meteorological or topographical conditions or the proximity of population concentrations may affect the impact a particular source may have on its environment. Furthermore, the proximity of one source to another may have an impact on the extent to which pollutants from individual sources may react with one another to cause other harmful effects.

## IV. EPA AUTHORITY TO IMPOSE LAND USE CONTROL REQUIREMENTS UNDER THE FEDERAL WATER POLLUTION CONTROL ACT AND THE MARINE PROTECTION RESEARCH AND SANCTUARIES ACT

Implementation of the Water Pollution Control Act involves the development of water quality standards and limitations and guidelines with respect to permissible effluents which may be discharged into the nation's waters, establishment of state plans and planning processes for administering and enforcing water quality and effluent standards, the grant of funds for research, development and implementation of Water Act programs and for the construction of waste water treatment plants, and the creation of a NPDES permit system for pollution sources.

Grants may be made to support water pollution control agencies in the administration of their water pollution programs and for the construction of publicly owned treatment works. Grants for treatment works are subject to a number of conditions including consistency with areawide waste treatment management plans and state continuing planning processes developed to implement Water Act standards. In addition, EPA must determine that the size and capacity of the plant relates directly to the needs to be served by the plant including sufficient reserve capacity. These requirements with respect to grants when coupled with the requirement that NPDES permits be obtained for operation of such plants would appear to give EPA substantial authority to require public agencies to implement and enforce growth plans for their particular areas, or at the minimum to undertake programs to analyse growth and development patterns.

In addition, where operation of a treatment plant may result in the collection of waste materials which must be disposed of, a treatment plant grant may be conditioned to require the plant operator to comply with other pollution control laws which would be applicable to the operation of the plant and/or the disposal of any waste products collected at the plant.

Areawide Waste Treatment Management Plans. Congress authorized an intensive regional planning effort to deal with water pollution problems in areas with serious pollution control problems by directing EPA to develop and publish guidelines for the identification of those urban-industrial or other areas where substantial water quality control problems may exist. (Section 208) A regional planning agency is to be established to prepare and implement an areawide waste treatment plan. Where an areawide plan is adopted and approved, permits under the NPDES system may not be issued if the new source would conflict with the plan. Furthermore, grants for construction of municipal waste treatment works may not be made if the works are not included in the plan.

Although Section 208 indicates an areawide plan "shall" be adopted, no penalties exist if such plans are not adopted and the failure to adopt a plan does not prejudice the rights of any party under other provisions of the Act; Where a plan is adopted, it must, among other things, identify necessary treatment works to meet anticipated needs over a 20 year period with annual updating, establish construction priorities for treatment works, establish a program to regulate location, modification and construction of any facilities which may result in waste discharges, and include a process to identify various nonpoint sources of pollution and methods to control such sources to the extent feasible. The power to regulate the location, modification and construction of facilities which may result in any discharge of pollutants within the area is perhaps the most far reaching power and the legislative history indicates an intent that the power be broadly exercised. Potential land use control mechanisms which might be adapted to Section 208 areawide plans include the following:

1. Coordination of traditional zoning, subdivision and planning processes with areawide planning process to limit the amount and type of development in an area so existing and projected treatment works would not be overloaded.

2. Development of a program of assigning allowable effluent limits to each parcel of land similar to an emission density zoning program under the Clean Air Act. Such rights could be transferrable.

3. A permit program directed only to those developments discharging directly into waterways and requiring NPDES permits.

Section 208 plans are to contain "procedures and methods (including land use requirements)" for control of nonpoint source pollution. This could be done by establishing performance standards for particular types of nonpoint sources or by requiring the operator of such a source to obtain a permit with appropriate conditions before undertaking the particular activity.

The agency administering the Section 208 plan is to be designated by the governor of the state and is to include elected officials (or their designees) from local governments. The agency must have appropriate authority to carry out portions of the areawide plan and EPA is authorized to reject the designation of an agency until deficiencies in such authority are corrected. Whether an existing regional agency is utilized or some new agency, EPA could require some degree of coordination between the agency and the existing land use planning agencies.

Water Quality Implementation Plans. Water quality standards developed by states under laws adopted prior to 1972 are applicable under the 1972 amendments to the Water Pollution Control Act, and where states have not adopted such standards, they are directed to do so. Standards are to be developed for all "navigable" waters in the United States which in effect includes virtually all waters in the country. States are also to identify those waters within their boundaries for which effluent limitations alone would not be stringent enough to implement applicable water quality standards. Maximum daily pollutant loads are to be established for these waters with procedures for limiting effluents to the maximum allowable load consistent with protection and propagration of shellfish and wildlife.

A state continuing planning process is to be developed which will result in plans for all waters of the state including effluent limitations as stringent as those developed by EPA. Individual water basins are divided into segments which are classified according to water quality for purposes of administration of the plan. The planning process is also required to be coordinated with other applicable state and local land use and natural resources plans for the water basin. If a state fails to adopt a planning process, the state may not administer a program for issuing permits under the NPDES system. The legislative history of the Act indicated a Congressional awareness of the interweaving of land use questions and water quality standards and Congress recognized that limiting effluents through technological controls would not be sufficient to implement water quality standards. Among the possible land use control elements which might be included in a planning process are the following:

1. Procedures for determining how the maximum allowable daily pollutant load would be allocated among various possible developments. Priority rankings and daily pollutant loads would have the effect of establishing a ceiling on the amount of new development which would be permitted in a particular area.
2. The procedure of classifying water basins into two different classes of segments could be further refined by providing for a number of different classifications of segments to which varying degrees of effluent limitations and/or land use controls might be required to achieve and maintain designated water quality standards.
3. Promulgation of overall growth plans designed to deal not only with areas where water quality standards are not being met but also areas where water quality is not a problem at the present time.
4. Development of guidelines with respect to the proximity of particular sources to assure that such sources are separated by appropriate distances.
5. Development of programs and guidelines for control of pollution from nonpoint sources.

Clean Lakes. In addition to the continuing planning processes, states are directed to classify lakes within their boundaries by eutrophic condition and prepare procedures, processes and methods (including land use requirements) for the control of pollution of such lakes. A review of experience under the Washington Shoreline Management Act of 1971, the Wisconsin Shoreland Zoning Law and the Tahoe

Regional Planning Compact would provide some insight as to three possible mechanisms for dealing with pollution of lakes and control of development around lakes. In addition, since many lakes have a number of political jurisdictions around their shores, it might be possible to centralize all authority in a single agency to deal with lake pollution and the development of all land surrounding each lake. Another alternative would be to adopt a permit program requiring that all development in the vicinity of lakes comply with various performance standards relating to such matters as runoff, soil permeability, beach erosion, dune protection, farming or lumbering procedures as well as other factors influencing pollution levels and lakes.

National Pollutant Discharge Elimination System. The Water Pollution Control Act establishes a National Pollutant Discharge Elimination System designed to require permits for the discharge of pollutants into any waters of the United States. States with permit programs approved by EPA may administer the permit process. To date only California, Oregon, Indiana, Connecticut and Michigan have approved permit programs.

The NPDES system applies to publicly as well as privately owned pollutant sources. However it is specifically provided that whenever any condition of a permit for discharge from publicly owned waste water treatment plant is violated, EPA or a state with an approved permit program may proceed in court to prohibit the treatment plant from accepting any new connections of polluting sources. Such action may effectively prohibit further development in an area served by a sewage treatment plant.

Permits must assure compliance with effluent limitations and standards of performance developed under the Act and must be appropriately conditioned to insure such compliance. This would include compliance with guidelines and requirements respecting control of nonpoint source pollution.

While EPA could choose simply to impose conditions on permits respecting the amount of waste water which could be treated by a plant so as to assure that effluent limitations can be adhered to, EPA could also require municipalities to undertake programs for the control of development generally to assure that allowable growth does not exceed the capacity of sewage treatment plants or alternative waste disposal techniques. Thus, through the NPDES permit, EPA may effectively place a limit on the amount of growth which can be permitted in a particular area. EPA may simply permit municipalities to grant permits on a first-come, first-served basis, or it may require municipalities to make adequate provision for various kinds of growth and development necessary to meet the reasonably anticipated needs of the community.

NPDES permits also are applicable to private sources of pollution although the conditioning authority would be substantially less extensive as a private source would generally have little power to affect what kind of development takes place on adjoining land.

Ocean Dumping. The requirement of the Marine Protection, Research and Sanctuaries Act that a permit be obtained before waste materials from the United States may be dumped into any ocean waters, with the requirement that EPA establish criteria considering, among other things, whether alternative disposal techniques including land dumping or recycling might be more appropriate, will have the effect of forcing many municipalities on the ocean shores to re-evaluate their sewage disposal procedures and may require them to implement programs to provide some form of land disposal of wastes previously dumped in the ocean. This may require a degree of land use planning not previously exercised by the relevant governments.

## V. EPA AUTHORITY TO IMPOSE LAND USE CONTROL REQUIREMENTS UNDER OTHER LEGISLATION

Noise Control Act. EPA is to develop guidelines concerning the effect of noise on public health and welfare which may lead to guidelines for location of industries emitting high noise levels. EPA's authority in this area is merely advisory as states are not required to adopt and enforce the published criteria. However, EPA can be influential in assisting and encouraging states to adopt appropriate noise regulations.

With respect to airports, however, EPA has greater authority to promulgate regulations respecting the operations of airports in conjunction with the Federal Aviation Authority. This may also extend to the appropriate location of airports and to the control of development surrounding airports as is necessary to protect public health and welfare.

EPA is also responsible for developing, after consultation with the Department of Transportation, noise emission standards for railroad equipment and facilities and interstate motor carriers. While there is nothing in legislative history to indicate EPA is given authority to impose land use restrictions on railroad equipment or facilities or interstate motor carriers, EPA may be able to influence such matters as routing of highways, railroads and mass transit facilities.

Solid Waste Disposal Act. EPA has authority under the Solid Waste Disposal Act to promulgate guidelines respecting solid waste recovery, collection and disposal systems. Such guidelines are to be "adaptable to appropriate land use plans." While these guidelines are not enforceable regulatory standards as in the case of air quality standards under the Clean Air Act, federal agencies having a jurisdiction over solid waste disposal activities are to comply with the guidelines. States are not required to adopt or comply with such guidelines but where the guidelines may be dovetailed to regulations under the Clean Air Act or the Water Pollution Control Act, EPA may be able to encourage states to adopt appropriate guidelines to ease the general problem of pollution control.

EPA is also authorized to make grants to state and local agencies enabling them to make surveys of solid waste disposal practices and problems and develop solid waste disposal plans and demonstrate projects. Demonstration project grants may be made only where consistent with areawide solid waste disposal plans complying with EPA guidelines which may permit EPA to influence the content of areawide plans.

Compliance with Environmental Controls by Federal Agencies. All five of the major acts previously described require federal agencies to comply with all applicable environmental standards developed under those acts whether developed by EPA or state or local governments. President Nixon issued Executive Order 11752 on December 17, 1973 which affirmed this requirement while establishing the procedure for exemption because of national security or other extraordinary cases where the national interest is paramount.

## VI. RELATIONSHIP BETWEEN EPA AND STATE, REGIONAL AND LOCAL LAND USE AND ENVIRONMENTAL PROTECTION AGENCIES

In some situations, as under the Noise and Solid Waste Acts, the final choice as to what kind of land use controls may be imposed to implement environmental standards will be left largely to state and local governments as EPA has little effective control to require state and local governments to adopt particular programs. However, with respect to air and water quality standards, EPA has more authority and can effect its own requirements in states which do not comply with provisions of those Acts. In addition, where grants are being sought under the Solid Waste Act or in the case of airport noise regulations, EPA is in a position to require implementation of land use control processes.

EPA could simply adopt relevant environmental quality standards with relevant emission or effluent limitations or guidelines and performance standards. With these standards and guidelines developed and published, EPA could approve state implementation plans which assure that no new sources of pollution will be permitted if the standards developed by EPA are exceeded. The question of which source will be built when and where would be left to local agencies.

However, it is ultimately EPA which is responsible under the various pollution control acts for developing and assuring implementation of appropriate environmental quality and performance standards. Thus it would also be appropriate for EPA to undertake a program requiring local agencies to take a more comprehensive look at growth and development within their jurisdiction and coordinate environmental quality enforcement with land use planning. Such a program could require broad scale coordination of all land use planning and environmental control programs which affect all types of development or it could concentrate on particular types of development or particular aspects of pollution control programs deemed most important and most in need of coordination with land use planning agencies. EPA could require the local pollution control agencies to have authority to implement land use controls EPA deems necessary or it might approve a procedure whereby the pollution control agency coordinates with the land use planning agencies provided the land use agencies do not have the authority to effectively override pollution control standards.

## VII. INTERRELATIONSHIPS AMONG EPA POLLUTION CONTROL PROGRAMS.

While each of the separate pollution control programs is directed toward one aspect of a common goal (to attain and maintain a cleaner and more healthful environment), the various programs will not always operate in harmony when two or more bear on a particular development. Many of the EPA programs and the state and regional implementation procedures and plans are still in the formative stage (or even in court) and it is difficult to judge at this point what the real impact of these programs will be when fully fleshed out and put into force. A few examples will illustrate the possible interrelationships between pollution control programs and the problems which may arise.

1. How can one dispose of solid waste in Gotham, a major metropolitan area on the coast of the United States. The Clean Air Act's state implementation plan makes incineration difficult if not impossible as Gotham's air quality does not comply with national ambient air quality standards. Disposal in a sanitary landfill -- presuming a nearby site can be found in the land-scarce metropolitan area -- must be undertaken in a fashion which guards against polluting groundwater (via leaching) or surface water (via runoff) supplies, contrary to the Water Pollution Control Act. Moreover, the state has adopted guidelines preventing such disposition under the Solid Waste Disposal Act. Although Gotham is on the Atlantic Ocean, it is limited in its ability to dump its garbage at sea by the Marine Protection, Research and Sanctuaries Act. Presuming the economic feasibility of removal and disposition to a site far from the metropolitan area (which, again, could not be an incineration site in conflict with significant deterioration standards), the state's Solid Waste Act guidelines indicate a number of places where sanitary landfills would be appropriate, but the local zoning regulations in most counties and municipalities zone out landfills and even solid waste disposal plants -- after all, what community wants a "dump" in its backyard?

2. The City of Centerville, a major metropolis in the center of the United States, has found its existing airports too busy or too small to meet air traffic needs. Even if sufficient land were available to accommodate a jet airport in Centerville, airport noise regulations would prohibit a location so close to a high population density. However, location of the airport at a site consistent with Noise Act standards would place the airport beyond existing mass transit facilities requiring reliance on automobiles for transportation to the airport. This would mean development of a substantial complex source in a rural area where the air is clean. Furthermore, existing sewage plant capacity is not sufficient to handle all the storm water runoff from runways and parking lots.

3. The metropolis of Sparkletown has been rapidly growing and faces increasing needs for additional electric power. Existing air quality is of such poor quality that new fossil-fueled electric generators are not permitted in the city limits. The lack of sufficient water and land for cooling ponds limits the usefulness of nuclear generating plants because of inability to meet thermal pollution standards. Construction of coal-fired generating facilities at coal mines outside the city is inhibited because of the significant deterioration regulations applicable to the clean air in the rural area of the coal mine.

The matrix following Chapter VII is an effort to illustrate in a graphic form various types of development as they are affected by the major pollution abatement and control programs of EPA. While EPA has some flexibility in establishing standards and issuing appropriate permits, this flexibility is limited. Furthermore, the various pollution control acts do not provide a mechanism for taking into consideration governmental laws and policies other than pollution control policies. The effort to administer the individual pollution control programs of EPA without some form of coordination among those programs and without some consideration of the impact of those programs on other state, federal and local policies could bring about a rational, chaotic and very expensive result.

## VIII. EXISTING COORDINATION METHODS

The various pollution control statutes contain no specific requirement that state implementation plans consider more than a single environmental problem. Furthermore, the requirement and preparation of plans does not mean the environmental objectives will be attained. Various plans are not necessarily compatible and may lead to altogether inconsistent results. The need to coordinate government programs is widely recognized but not easily accomplished. Some existing coordination mechanisms include the following:

1. National Environmental Policy Act;
2. The A-95 Clearinghouse Process; and
3. Integrated Grant Administration (IGA) Program.

Each of these programs has its shortcomings. NEPA requires only that conflicts between environmental and other goals be noted and given consideration. No mechanism is contained within the Act for the resolution of such a conflict should it surface. Moreover, NEPA applies only to a limited class of federal or federally-supported activities and does not apply to many state, regional or local activities which have a substantial impact on land use.

The A-95 Clearinghouse Process, while requiring a mandatory review, does not provide for a reconciliation of conflicts. The process generally looks to a comprehensive plan as the basis for its review but often there is no plan or its quality is dubious. In addition, the process applies only to a limited number of projects and has no direct effect whatsoever on implementation of many of the various EPA programs.

The Integrated Grant Administration Program is too new to be definitively evaluated. However, it is not designed to promote resolution between conflicting program goals.

## IX. COORDINATED ENVIRONMENTAL PLANNING

EPA was created to bring together the nation's various environmental programs under a common umbrella. To prevent conflict and avoid duplication among the whole range of federal, state and local environmental programs, a system of coordinated environmental planning should be applied to the whole panoply of environmental plans, decisions and regulations of state, regional and local governments which impact on land use. Various consultants employed by EPA with remarkable unanimity have recommended greater coordination of the methods for determining the proper use of land. It is becoming increasingly important for EPA to give serious attention to coordination of its own and other land use control programs. Public pressure is mounting as the courts force EPA into increasingly rigid enforcement of single purpose goals. Unless methods are found for optimizing land use decisions in light of all valid goals, public pressure could cause EPA's basic statute to be weakened.

EPA is considering adoption of a "consolidated grants program" requiring only one grant application and administrative mechanism for the funding of personnel and facilities used for the programs involving two or more media. In 1973 there were four states participating in a test of the program with apparently satisfactory results. Ten additional states are expected to be added to the existing program during this fiscal year. As the purpose behind the creation of EPA was to bring together the major environmental programs in a coordinated manner, it is clearly within EPA's power to encourage states to undertake their own programs of coordinated environmental planning and regulations. The extent to which EPA could require such coordination as a condition to approving state air and water plans is not clear as the legislative history contains little indication that Congress envisioned an intermedia approach. Further study of EPA's authority to require coordinated environmental planning is necessary.

National Land Use Policy Legislation. The Senate passed Land Use Policy and Planning Assistance Act of 1973 (S.268) would provide one mechanism giving EPA greater authority to implement some degree of coordination between land use and environmental control programs. State land use programs could not be approved under the Act until EPA is satisfied the program is not incompatible with Federal Water Pollution Control Act, Clean Air Act and other pollution control acts.

Conclusion. In summary, a need exists to coordinate various environmental plans and regulations affecting land use. The search for such coordinating function is not new. EPA has a responsibility and the authority to encourage the states to coordinate their environmental planning to avoid contradictory land use implications.

Passage of S.268 in its present form would enable EPA to ensure that the environmental planning was also coordinated with other state land use programs.

# CHAPTER I

## INTRODUCTION

The purpose of this report is to provide an independent evaluation of the legislative basis for the involvement of the United States Environmental Protection Agency (hereinafter referred to as "EPA") with the land use decision making and control processes of the various states. Ways are suggested by which EPA can more effectively use land use control measures where necessary to achieve EPA's statutory goals.

In its broadest terms, land use is the carrying out of an activity or operation in, on, over, or under a parcel of land. Land use traditionally has been controlled by a wide variety of direct and indirect control systems of federal, state and local governments. These include such obvious direct systems as local zoning, subdivision, public health, building and annexation controls and such equally important and indirect systems as real estate property taxation and state and federal highway and housing policies.

In recent years these traditional systems have been augmented by new programs to control the use of land on a state and regional basis. For the most part the new systems do not replace but merely supplement the traditional systems of control, thereby adding to the complexity of the control network. In addition, of recent origin are statutes designed to control air and water pollution and to regulate noise and the disposal of solid waste materials. Each of these programs administered by EPA have significant impact, both direct and indirect, on land use patterns.

Under the Clean Air Act, EPA is responsible for developing national primary and secondary ambient air quality standards to protect public health and welfare, standards of performance for new stationary sources and emission limitations for hazardous sources. Implementing these standards and limitations requires, among other things, control of pollution from complex sources (development generating substantial motor vehicle activity); and the prevention of "significant deterioration of existing air quality." Implementation is sought through state implementation plans and permit procedures which may involve land use controls.

EPA is responsible under the Federal Water Pollution Control Act for developing, among other things, water quality standards; effluent limitations for waste water treatment plants, industrial operations and various point sources of water pollution; guidelines with respect to control of nonpoint source pollution; and pretreatment standards for sewage dumped into municipal waste treatment systems. Plans are to be developed by states for each water basin to implement the various water quality standards and effluent limitations, while areawide waste treatment management plans are to be developed to deal with problems in urban industrial concentrations and other areas where pollution control problems exist. Grants may be made by EPA for the construction of waste treatment facilities if the facilities are in conformity with a state water quality implementation plan. Permits for discharges into waters of the United States are required under the National Pollutant Discharge Elimination System and no state permit program may be approved by EPA unless an adequate state implementation plan has been approved.

Through the Marine Protection, Resources and Sanctuaries Act EPA exercises control over the dumping of wastes from the United States into the oceans. This program may force localities along the coastal areas to review their practices of dumping waste in the ocean and may require use of alternative methods of waste disposal.

Under the Noise Control Act of 1972, EPA is to develop standards concerning acceptable levels of noise and standards for emissions from various products. In addition, EPA is to propose regulations for the control and abatement of aircraft and airport noise, and for the control of noise emissions from interstate railroad and motor carrier equipment.

EPA is to develop guidelines for the collection and disposal of solid waste materials pursuant to the Solid Waste Disposal Act. EPA is to encourage the development of areawide solid waste disposal plans which are to be adaptable to local land use plans. This Act does not have the mandatory force of the Air and Water Acts for the only handle EPA has to require or encourage states to adopt appropriate solid waste disposal plans is through its authority to make grants for the development of solid waste disposal plans and recycling facilities. Grants for facilities may not be made unless the facilities are in accordance with areawide solid waste disposal plans.

The general nature of the impact of these five major pollution control acts on land use patterns is described in Chapter II of this report. EPA's authority under these acts to exercise or to require state and local agencies to exercise land use controls in the implementation of the various environmental protection responsibilities is described in Chapters III through V together with suggestions for types of land use programs which might be useful in attaining environmental objectives and procedures for implementing such programs. While it is not the objective of this report to reach definitive conclusions regarding the extent to which any particular land use program might achieve statutory goals better than other regulatory techniques, some evaluation of the relative merits of one land use program as against others is included.

EPA's statutory authority provides some flexibility to EPA to establish mechanisms for achieving the objectives of the various programs. Since it is clear Congress intended state and local government to be a substantial partner in the problem of environmental protection, Chapter VI explores the relationship of EPA with state and local environmental and land use control agencies. The question of which agency determines which policy or mechanism shall be implemented at a particular point in time is central to each program.

While Chapter II examines some of the impact these programs can have on the use of land and society, Chapter VII examines the interrelationship between the various programs as they impact on land use and how one program can have an impact on the implementation of another program. Many of EPA's programs and the state implementation plans are still in the formative stage so it is difficult to accurately judge what the eventual impact and interrelationship of these programs will be as they relate to land use. However, some hypothetical examples based on experience to date will illustrate some of the problems of trying to implement a number of pollution control programs without appropriate coordination.

Chapter VIII examines existing methods that are available for attempting to coordinate government policies to find the optimum solution to the problems and conflicts posed by uncoordinated environmental control programs. It examines a variety of planning and management techniques and concludes that while there are significant benefits to be derived from these techniques, their ability to provide the necessary coordination is quite limited.

Chapter IX suggests methods by which EPA could encourage states to undertake comprehensive systems of planning and regulations of land use that will help achieve EPA goals in a manner consistent with other governmental policies.

## CHAPTER II

## LAND USE IMPACT OF EPA RESPONSIBILITIES FOR CONTROL OF POLLUTION

The Environmental Protection Agency has been charged with the implementation of the Clean Air Act and the Water Pollution Control Act and a growing number of other programs designed to control pollution in the form of ocean dumping, noise, solid waste disposal and pesticides. The various statutes under which EPA operates were enacted at different times, each designed to remedy a single and separate category of environmental damage. Each of the statutes significantly affects the way land is used. But none of the statutes specifically provides a mechanism to coordinate its enforcement and implementation with other environmental standards and policies for which EPA is responsible.

However, environmental problems tend to be interrelated with one another through a complex network of ecological connections. The more this network is understood the more difficult it becomes to find a simple solution to any single environmental problem without threatening new problems in another sector.

When EPA was created in 1970, Roy Ash, then Chairman of the Advisory Council on Executive Organization, testified before Congress about President Nixon's reasons for creating the Environmental Protection Agency:

> The present fragmentation of pollution control programs among several agencies of government no longer serves the public interest . . . . Such fragmentation is . . . characteristic of organizational responses to problems that were first perceived independently. Such piecemeal organizational structure becomes inadequate when the interrelation of the problem and the solution becomes the dominant factor.
>
> There is no perfect structural arrangement which will reconcile all interests or resolve all conflicts . . . . The reorganization provides an opportunity to integrate the functions and activities of those programs incorporated in the EPA. In doing so, the potential for effectiveness of these programs is enhanced. 1/

Nowhere is the complex network of interrelationships more apparent than in an examination of the land use impacts of various EPA programs. Land used in the way most likely to promote cleaner air may create water pollution problems -- and vice versa. This Chapter provides illustrations of land use actions taken to support the goals of each EPA program that may affect the goals of another program. 2/

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1/ See, Hearing on Reorganization Plan No. 3 of 1970, before a subcommittee of the House Committee on Government Operations, 91st Congress, 2nd Session, pages 44-47 (1970).

2/ In some cases the impact of EPA programs on land use may vary depending on the interpretation of EPA's authority to administer the program, as pointed out in Chapters III to V. However, most of the conflicts in land use policy with which EPA must be concerned do not arise as a result of differing interpretations of particular statutes. Rather, they arise as a result of unavoidable interrelationships between land use actions taken to implement the goals of separate statutes.

In any examination of environmental problems there are many instances in which, as Mr. Ash testified, "the interrelation of the problem and the solution becomes the dominant factor." It is in dealing with these interrelationships that EPA can demonstrate its ability to integrate the functions and activities of its programs, thereby enhancing their potential for effectiveness.

## A. Land Use Implications of Air Act Enforcement

As discussed in Chapter III, the Clean Air Act requires states to develop air quality implementation plans which contain adequate authority to prevent the construction and modification of new sources of air pollutants where the sources would interfere with the attainment or maintenance of national air quality standards.[3] The land use implications of this act may inadvertently result in an exaggeration of growth pressures on the very suburban areas which are finding such growth most distasteful.

This prognosis results from the Act's constraints on development in both highly urbanized and very rural areas. Many of the nation's largest cities now have air quality which does not meet the national standards. Thus, the construction of new sources of pollutants in such areas, even though the new sources may be operated in compliance with applicable standards of performance or emission standards, would not be permitted if they would in any way interfere with the attainment of the national air quality standards. Thus, in many of the nation's larger cities, until air quality is improved to the point it meets national standards, new industry and development causing pollution will be severely limited. In addition, new sources outside these cities may affect the cities' air quality and may be subject to restrictions on allowable development.

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[3] See *infra*, pp. 28 *et seq*.

Where the national air quality standards are likely to inhibit the location of new polluting sources in urban areas, the requirement that EPA disapprove state implementation plans which do not protect against significant deterioration of existing air quality where it is cleaner than prescribed by the national standards is likely to inhibit or set limits on the amount or type of development which may take place in rural and other areas of the United States where air quality is substantially better than the national standards would require.[4]

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[4] Indeed, the explanation accompanying proposed regulations for prevention of significant air quality deterioration indicates that while a 1,000 megawatt capacity coal-fired power plant meeting the new source performance standards of EPA could possibly be built under the proposed regulations in an air quality control region, that plant would undoubtedly take up a large part of the available emission allowance under the significant deterioration regulations. 30 Fed. Reg. 18990 (July 16, 1973).

The prohibition of new sources in areas where air quality does not meet national standards and the limitation on the amount of development which may be permitted in areas with air cleaner than national standards is likely to result in a concentration of new sources in bands between these two areas.

These new "bands" are likely to be on the fringes of urban areas. As air quality improves in urban areas which are not in compliance with national ambient air quality standards, air quality in fringe areas will improve. New development can be accommodated (assuming national ambient air quality standards are not violated) only if the new development does not cause a violation of air quality standards in the heavily polluted areas or exceed the limits permitted by the regulations proposed to deal with deterioration of air quality.

Zone boundaries thus become very important--and worth large sums to individual landowners. The questions will invariably arise as to why a particular regional zone boundary is drawn in one place rather than a mile further south or west. Moreover, the inevitable hard questions are going to arise as to what amount of additional pollution constitutes "significant deterioration" of air quality.

A further complicating factor is the necessity for dealing with complex sources and the accumulation of automobile exhausts which accompany such developments. Developments such as airports, universities and shopping centers can be substantial attractors of motor vehicle traffic. Implementation of Air Act standards is likely to require a reduction in traditional reliance of Americans on the use of the automobile, particularly in heavily populated areas, to reduce the build up of automobile exhausts. Thus, mass transit facilities will be encouraged. The existence of adequate mass transit may facilitate the development of complex sources such as airports, universities and shopping centers since such developments can then be utilized by that portion of the public which uses mass transit facilities rather than the automobile. But, mass transit facilities may also tend to concentrate other development near the facilities bringing about a conflict in objectives.

While mass transit facilities may reduce reliance on automobiles, if such facilities result in the concentration of other stationary source developments along right-of-ways, then implementation of Air Act standards may still be impeded. Thus, even in situations where mass transit may clearly produce overall benefits for cleaner air, its local impacts need to be carefully examined.

When potential air pollutants are removed during industrial processes prior to exhaustion into the air, the disposal of these pollutants may present problems for other media. The standards of performance and emissions limitations for new and hazardous sources encourage devices for the removal of the polluting materials before they are emitted into the atmosphere. These devices often result in the accumulation of large quantities of such materials as sulfur, sulfuric acid, flyash and other solid materials which will then have to be disposed of in some way. In many instances, this may mean disposal in landfills, thus increasing requirements for additional landfill sites to which Water Pollution Control Act or Solid Waste Disposal Act programs may be applicable as discussed in Chapters IV and V of this report.

## B. Land Use Implications of Water Act Enforcement[5]

Enforcement and administration of Water Act standards can be expected to have effects similar to enforcement of Clean Air Act standards. New pollution sources will be banned even where they use the best available water pollution control technology if the sources would interfere with the attainment of applicable water quality standards. Waters in many urban and other areas of the country now do not meet applicable water quality standards so further development of polluting sources in such areas may be effectively limited.

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[5] See Chapter IV.

Development in areas where water quality is quite clean may also be inhibited even though a new source may be constructed in compliance with relevant effluent standards if those standards are not stringent enough to implement applicable water quality standards. This inhibition may apply not only to point sources of water pollution but also to significant nonpoint sources. Thus, an effort to build an airport or a shopping center or to undertake substantial strip mining or lumbering activities in an area where existing water quality is quite clean may be limited because of the likelihood of nonpoint source (runoff) pollution which would degrade the existing water quality.

The National Pollutant Discharge Elimination System (hereinafter sometimes referred to as "NPDES") has built into it a mechanism for significantly affecting land use. Section 402(h) provides that if a condition of a permit for discharges from a publicly owned treatment works is violated, EPA or a state (if the state permit program is approved) may proceed in court to restrict or prohibit the introduction of any new pollutant into the treatment works. EPA is required to condition the permit on compliance with all of the applicable effluent limitations and standards of performance prescribed under the Act and other conditions may be imposed as deemed appropriate. Thus, should a municipal treatment plant become loaded to a capacity such that the effluent discharge from the plant would violate any of the applicable effluent limitations, the plant would be in violation of the NPDES permit and EPA could sue to prohibit any further introduction of any pollutant into the treatment works. This will effectively place a limit on the amount of development which any particular waste treatment plant can serve with the potential of effectively leaving to the courts a determination of the quantity and possibly the type of development which may take place in a given area if the community fails to plan for sufficient sewer capacity.[6]

Water Act standards will apply not only to residential and industrial development which results in the accumulation of large quantities of waste water which must be appropriately treated and disposed of, but they may also apply to other activities such as farming, mining, timber cutting and other activities on land which do not result in specific accumulation of waste water, but which can result in substantial quantities of sedimentation, pesticides or other waste materials being drained off of the land into adjacent surface waters or underlying groundwaters. Mechanisms for control of this kind of nonpoint source pollution have not to date been promulgated by EPA but devices such as requiring particular kinds of cultivation techniques by farmers, selective cutting rather than clear cutting by timber companies, or requiring strip mine operators to take certain precautions in their operations to prevent runoff are not inconceivable.

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[6] EPA is still considering the type of conditions it may impose on NPDES permits for publicly owned waste treatment plants. For example, the conditions could simply be limited to conditions that the plant comply with all applicable effluent limitations. This would have the indirect effect of limiting development in the area served by the plant since it would limit the number of new sources of pollution which could be hooked up to the plant. On the other hand, conditions could be conceivably developed which might go further in prescribing the quantity and type of development which would be permitted to be attached to the municipal plant to prevent a water quality problem. The EPA Memorandum dated January 15, 1974 from Robert L. Sansom, Assistant Administrator for Air and Water Programs, and Alan G. Kirk, Assistant Administrator for Enforcement and General Counsel, to Regional Administrators, Guidance for Conditioning of Municipal Permits in High-Growth Areas takes an intermediate position suggesting that in certain cases planning and management of sewer capacity be coordinated with the issuance of building permits in the area.

As in the case of the Air Act, implementation of effluent limitations under the Water Act is likely to result in the accumulation of large quantities of waste materials which will have to be disposed of in some manner. Much of this disposal will be on land, whether at sanitary landfill sites or in the form of sludge which may be spread on land as fertilizer. Standards and guidelines developed under the Water Pollution Control Act, Clean Air Act, Marine Protection, Research and Sanctuaries Act of 1972 and Solid Waste Disposal Act of 1972 all may have some bearing on such disposal.

### C. Land Use Implications of the Marine Protection, Research and Sanctuaries Act of 1972 7 /

In coastal regions, such as the area around New York City, where disposal of municipal waste has been

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7 / See Chapter IV, *infra*, at pp. 20-21.

accomplished simply by taking it out into the ocean and dumping it, the anti-dumping policy expressed in the Marine Protection Act may result in disposal of such wastes -- along with solid industrial wastes -- in sanitary landfills or by other processes such as incineration. The impact of the Act could be substantial in coastal areas for the cost of dumping wastes in the ocean is considerably less than the cost of providing alternative treatment or utilizing sanitary landfills. The ocean costs nothing except for the barges necessary to carry the waste materials, but land for landfills could be very expensive, and, creates the general problems of landfills discussed elsewhere in this report.

## D. Land Use Implications of the Noise Control Act [8]

Although much of the Noise Control Act is directed at the technology for reducing noise emissions from machinery and products or interstate transportation equipment, the Act will have an impact on land use. Airports in particular are enormous developments in themselves and they tend to generate substantial amounts of associated development in surrounding areas. Airports also unavoidably generate great amounts of noise which can be not only unpleasant but severely damaging. EPA as well as other governmental agencies are working to develop standards and guidelines to control the impact of airport noise and what can be expected is that it will be suggested airports be located far out in rural areas away from residential or other high population density development.

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[8] See Chapter V.

Standards are likely not only to suggest location of airports in rural areas but also to regulate the kind of development which will be permitted near any new airport. Presently a variety of kinds of development including hotels, motels and other service and commercial business catering to or utilizing airports heavily tend to grow up around airports. Airport noise standards can be expected to influence how much of such development can be located where and under what conditions in the vicinity of airports. This in turn would influence the living and working habits of those persons employed by or utilizing such development.

It is also possible that Noise Control Act guidelines with respect to noise levels (as opposed to noise emissions) may influence the routing of highways and mass transit facilities away from or on the fringes of population concentrations. Heavy noise emitting industries may also be directed to more remote locations to reduce noise impact on surrounding development or the development which may be permitted around such noise sources may be limited. Once health guidelines are developed by EPA with recommended background levels of noise, developments in hazardous noise zones may be condemned, relocated or compensated for damages due to excessive noise.

## E. Land Use Implications of the Solid Waste Disposal Act. 9/

Whenever solid waste material must be disposed of, whether the material is the remains of other pollution control processes or is material accumulated from the public or other commercial or industrial processes, if an areawide solid waste disposal plan is in effect, disposal will not be a simple matter of finding an empty lot or old stone quarry to use as a dumping ground. Solid Waste Act guidelines will have to take into account such things as the geology and soil conditions of disposal sites to assure that water draining through the dumped material will not readily get into groundwater sources or nearby surface waters with substantial dissolved pollutants. A landfill site located on a solid rock bed may be convenient but it may also be very dangerous as polluted water can accumulate and drain into nearby water sources. Care must also be taken to assure that amounts of earth are available to cover the dumped material at appropriate intervals.

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9/ See Chapter V, *infra*, pp. 128 *et seq*.

Such cover is necessary to avoid odor problems and to assure proper filling of the site and decomposition of the material. These considerations will limit the possible sites for disposal facilities.

Landfill sites generate a great deal of truck traffic and odor which is likely to be objectionable to surrounding landowners, particularly if the site is anywhere near residential development, schools, hospitals or various other kinds of development where large numbers of people are present. What may be a suitable location for a landfill site because of soil or geological characteristics may not be consistent with local land use plans for that particular area. Local governments are not notorious for their love of landfills and may not permit landfills to be located at sites most suitable even though other sites may be lacking.

Local governments are not obligated to adopt or follow Solid Waste Act guidelines unless they are seeking federal grants for solid waste programs. However, federal agencies are required to comply with the guidelines, and there are enormous tracts of public land which the government makes available to mining companies under the Mineral Lands Leasing Act.[10]

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[10] See Title 30, U.S.C.A., 41 Stat. 427 (Feb. 25, 1920), as amended.

Mining processes result in large quantities of solid waste material which in the past may simply have been dumped at a convenient empty spot. Under the Solid Waste Act, the Department of the Interior will be required to impose tough conditions in mineral leases respecting the disposal of mineral wastes.

## Summary

As this chapter points out EPA has no choice but to impose regulations affecting the use of land. The statutory goals established by Congress contain numerous implications about the way land will be used, and some of these implications for land use may be inconsistent with those posed under other statutes. These implications may not have been anticipated by Congress, but EPA will inevitably bear the responsibility for them. But EPA is by no means impotent in regard to the effect of its programs on the use of land. Congress has in numerous instances authorized EPA to exercise specific powers to control land use as a means of implementing its goals. The authority of EPA to exercise such powers is the subject of the next three chapters.

## CHAPTER III

## EPA AUTHORITY TO IMPOSE LAND USE CONTROL REQUIREMENTS UNDER THE CLEAN AIR ACT

As pointed out in Chapter II, the various pollution control programs can have significant impact on the way land is used. Pollution control mechanisms have generally been thought to involve technological controls on how a particular process is carried out to prevent or minimize the dumping of waste products into the environment with adverse impact. As suggested in this and the succeeding two chapters, various land use control mechanisms may be useful in the implementation of pollution standards.

Land use controls differ from pollution controls in that land use controls generally determine the activities that will be permitted on particular land. Such controls are generally less concerned with the process by which those activities are to be carried out than with the decision as to whether the activities should be carried out at all.

As early as 1955, Congress recognized air pollution as a nationwide problem and found action was needed to study and control the problem. Although no steps were taken to provide for direct federal control of air pollution, Public Law 159[1] was enacted stating "that the prevention and control of air pollution at its source is the primary responsibility of states and local governments." As time passed, it became clear further action would be necessary to protect the nation from further deterioration in air quality. Awareness of these problems led to the adoption of the Clean Air Act of 1963,[2] and later, the Air Quality Act of 1967.[3] Both of these Acts left the major regulatory responsibilities with state and local governments.

Recognizing the continuing inadequate response of state and local governments to protect and preserve air quality, the Clean Air Act Amendments of 1970 were adopted significantly increasing the extent of federal authority in the control of air pollution.[4] In general, the fight against air pollution under the Clean Air Act Amendments of 1970 was to be undertaken by establishing national ambient air quality standards necessary to protect the public health and welfare, establishing national standards of performance against which emission of pollutants into the atmosphere would be measured, requiring states to devise plans and programs by which the air quality standards would be administered and enforced, and providing funds for research and for programs to implement Clean Air Act standards and objectives.

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[1] Ch. 360, 69 Stat. 322 (1955).

[2] Pub. L. No. 88-206, 77 Stat. 392 (December 17, 1963).

[3] Pub. L. No. 90-148, 81 Stat. 485 (November 21, 1967).

[4] Act of December 31, 1970, Pub. L. No. 91-604, 84 Stat. 1676, 42 U.S.C.A. §§1857 *et seq.* (Hereinafter referred to as the "Clean Air Act." Clean Air Act section numbers referred to hereinafter are section numbers of Pub. L. No. 91-604.)

Land use control mechanisms may be useful in achieving the goals of the Clean Air Act. A number of provisions of the Clean Air Act authorize EPA to require consideration or exercise of land use control mechanisms by state and local agencies (or other federal agencies) in dealing with potential sources of air pollution.

## A. Grants for Air Pollution Planning and Control Programs

Section 105 of the Clean Air Act authorizes EPA to make grants to local air pollution control agencies in an amount up to two-thirds of the cost of planning and developing pollution control and prevention programs and up to one-half of the cost of maintaining such programs. In addition, EPA may make grants to air pollution control agencies encompassing two or more municipalities in an amount up to three-fourths of the cost of planning and developing and up to three-fifths of the costs of maintaining such programs.[5/] The Act further provides that before any planning grant may be made to any air pollution control agency, EPA must have assurances the agency has the "capability" of developing a comprehensive air quality plan for the air quality control region.[6/] Grants shall be made by EPA "upon such terms and conditions as the Administrator may find necessary to carry out the purpose of this section."[7/]

Given EPA's authority to impose terms and conditions on grants to air pollution control agencies, EPA

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[5/] Clean Air Act, §105(a)(1).

[6/] *Id*. at §105(a)(3).

[7/] *Id*. at §105(b).

may require such agencies to consider or implement land use control programs as a condition to receiving such a grant. Whether or not a local air pollution control agency seeks federal funds is a purely voluntary matter, and if conditions imposed are deemed too restrictive or unfavorable by an applicant, the applicant may choose to decline federal funds and conduct a program at its own expense.[8]

With respect to grants for planning, developing, establishing or improving programs for the prevention and control of air pollution and the implementation of ambient air quality standards, EPA could require an applicant to submit a proposed work program describing its existing land use authority (if any) and the process to be undertaken to determine how to use existing land use controls. In addition, if an applicant has little or no authority over land use within its jurisdiction, it may be required to provide an analysis of its environmental situation to determine what if any land use controls would be necessary or useful to achieve and maintain prescribed air quality standards. If EPA determines particular types of land use controls may be useful in achieving and maintaining air quality standards, an applicant for funds might be required to study the application of any such controls to its particular circumstances and provide a report to EPA as to the advisability of their implementation.[9]

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[8] As a practical matter, this may not be a significant consideration as it is not likely EPA will require more stringent conditions under the grant program than it will require with respect to state implementation plans and programs for control of emissions from stationary and hazardous sources. However, it is a factor which must be kept in mind in determining what sort of conditions to impose on grants.

Grants may be made to regional air pollution control agencies (encompassing two or more municipalities) only if the agencies have "substantial responsibilities" for carrying out applicable state air quality implementation plans.[10] Although the Act does not specify the kind of maintenance program EPA may fund or the kind of conditions which may be attached to grants to air pollution control agencies, in light of the Act taken as a whole and the contemplation by Congress that land use controls play a role in control of air pollution,[11] applicants for grants for the maintenance of air quality control programs could be required to have authority to implement appropriate land use controls or to indicate how air pollution standards will be met without the application of such controls.

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[9] For example, if EPA were to conclude that emission density zoning might be a useful device in the control of air pollution, an applicant for planning and development grants could be required to study the usefulness of an emission density zoning program in its particular air quality control region and to provide a full and detailed report to EPA as to the reasons why such a program should or should not be implemented. Since Section 105 grants are for planning and development such studies would seem more appropriate than a requirement that particular kinds of land use controls evolving out of a planning and development program be actually implemented as part of an air pollution control strategy.

[10] Clean Air Act §105(a)(1)(C).

With respect to implementation of air quality and performance standards as elements in air pollution control programs, the grant program may be an effective method of encouraging and assisting air pollution control agencies to more effectively study the possible application of land use control mechanisms and/or the coordination of air pollution control agencies with other state and local agencies dealing with matters of land use planning and control. Moreover, it does not appear that the grant program can easily be used to foster direct land use control programs.

## B. State Air Quality Implementation Plans

1. Statutory Requirements. EPA is charged with establishing two types of national ambient air quality standards: the national primary air quality standard, which is that level of air quality the attainment and maintenance

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[11] See *infra*, pp. 35-39.

of which is necessary to protect the public health;[12] and the national secondary ambient air quality standard, which is that level of air quality the attainment and maintenance of which is "requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollution in the ambient air."[13] EPA is also required to protect against "significant deterioration" of air quality even where that air quality is cleaner than the minimum prescribed by national standards.[14] Thus, although ambient air quality standards are to be designed for national application, the effective standards in a particular clean area may be substantially different from the effective standard in a polluted urban area because the "significant deterioration" standard as engrafted on the ambient air quality standards may require imposition of much stricter environmental and development controls to prevent significant deterioration than would be required if achievement and maintenance of ambient air quality standards were the objective. What additional controls might be required to prevent significant deterioration would be a matter of policy to be determined in each particular case.

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[12] Clean Air Act §109(b)(1).

[13] *Id*. at §109(b)(2).

[14] *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253 (D. D.C. 1972) *aff'd*., 4 E.R.C. 1815 (D.C. Cir. 1972) (hereinafter referred to as "*Sierra Club*"). Pursuant to the ruling in this case, EPA has published a series of four alternative regulations designed to prevent "significant deterioration" of air quality in those parts of the United States where the air is cleaner than required by the national ambient air quality standards (Proposed EPA Reg. §52.21, 38 Fed. Reg. 18986, July 16, 1973) identifying sixteen categories of new sources, as being subject to the proposed regulations. Any other source having a potential annual emission rate equal to or greater than 4,000 tons per year of particulate matter, sulfur dioxide, nitrogen oxide, hydro-carbons or carbon monoxide would also be covered as would any other source the control of which would be necessary to prevent significant deterioration. Specific standards of allowable increases in pollutant levels would be set only with respect to particulate matter and sulfur oxides with a requirement that new

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14/ (cont'd.)
or modified sources be constructed and operated employing the best available control technology for minimizing all five types of pollutants. Complex sources would not be covered by the proposed regulations. Each of the four alternatives proposed by EPA would set limits on permissible growth in areas with air cleaner than national standards. Thus, a new source using the best available emission control technology meeting all of EPA's performance standards and not resulting in any violation of the national ambient air quality standards might be barred because existing air quality would be "significantly" reduced by operation of the source in a clean area. As a result of the Sierra Club case, the effective air quality standard for a clean air area may be considerably more stringent than the national standards.

Within nine months after promulgation of national primary or secondary ambient air quality standards, each state must submit to EPA a plan providing for the implementation, maintenance and enforcement of such ambient air quality standards within each air quality control region within the state. This plan must also provide for the prevention of significant deterioration of air quality in clean air areas.[15] Each implementation plan must be approved by EPA before it becomes effective. Any such plan may be approved by EPA if it is determined, among other things, the plan provides for attainment of the primary standards as expeditiously as practicable but in no case later than three years from the date of approval of the plan.[16]

In the case of the secondary standards, the plan must specify a reasonable time within which such secondary standards would be attained.[17] In addition, the plan must include emission limitations and schedules for compliance with the limitations together with such other measures as may be necessary to insure attainment and maintenance of the national standards including, but not limited to, land use and transportation controls,[18] and a procedure for the review of the location of new sources to which emission standards will apply.[19] The procedure for reviewing the location of new sources must include adequate authority to prevent the construction or modification of any new source subject to the emission standards at any location which would prevent the attainment or maintenance of any national primary or secondary air quality standard.[20]

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[15] Clean Air Act §110(a)(1); Sierra Club, supra, note 14.

[16] Id. at §110(a)(2)(A)(i).

[17] Id. at §110(a)(2)(A)(ii).

2. Indirect Source Review and Air Quality Maintenance. EPA has adopted regulations with respect to the preparation, adoption, and submittal of implementation plans.[21] These regulations have been further amended as a result of a decision of the District of Columbia Court of Appeals in National Resources Defense Council, Inc. v. EPA[22] which, among other things, required

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[18] Id. at §110(a)(2)(B).

[19] Id. at §110(a)(2)(D).

[20] Id. at §110(a)(4). See also 40 C.F.R. §52.18.

[21] Title 40 C.F.R., Subchapter C, Part 51.

[22] 475 F.2d 968 (D.C. Cir. 1973).

EPA to deal with the problem created by air pollution resulting from vehicular traffic near development. EPA has promulgated regulations designed to control the introduction of pollutants from so-called "indirect sources" or "complex sources" in addition to the standards developed for control of air pollution from stationary sources.[23] An indirect source is any development generating substantial emissions as a result of motor vehicle activity which is attracted to or associated with the development and which may interfere with the attainment or maintenance of any of the national standards. Regulations which would "trigger" application of indirect source controls have been promulgated by EPA.[24]

The regulations promulgated by EPA following the National Resources Defense Council case also provide that each state implementation plan must contain a control strategy to guarantee that growth and development in areas identified as having the potential for exceeding any national standard within the next ten years will not cause air pollution levels to exceed the national ambient air quality standards.[25] Every new development which may be a source of air pollution either by direct stack emissions or because of the indirect generation of motor vehicle activity (i.e., an indirect source) must be reviewed by the state before it may be built.

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[23] 40 C.F.R. 51, 38 Fed. Reg. 15834, June 18, 1973.

[24] 40 C.F.R. 51, 39 Fed. Reg. 7269, Feb. 25, 1974.

In response to amendments to the Clean Air Act which would have been made had the Energy Emergency Act passed Congress in December, 1973, EPA Administrator, Russell E. Train, withdrew regulations previously issued requiring review of new parking facilities for their impact on air quality. Rather, the date of any review of new parking facilities would be deferred until January 1, 1975.[26] Also withdrawn were regulations requiring certain states to impose parking surcharges as an element in transportation control plans. These actions were taken to bring EPA regulations in line with the proposed amendments. Although the amendments were not adopted in 1973, the reasons for the failure of Congress to enact them were unrelated to the amendments and EPA interpreted the Congressional actions as providing strong evidence of the intent of Congress.

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25 / 40 C.F.R. §52.12.

26 / 39 Fed. Reg. 1848, January 15, 1974.

3. Legislative History. Although a review of the entire Clean Air Act might suggest the principal air pollution control processes EPA is to deal with are direct controls over emissions, Section 110 makes it clear land use controls and the review of the location of new sources (with authority to prevent construction of such sources) are important elements in a state air quality implementation plan. Section 110(a)(2) provides that the EPA may approve a state implementation plan if it is determined that:

> (B) it includes emission limitations, schedules, and timetables for compliance with such limitations, and such other measures as may be necessary to insure attainment and maintenance of such primary or secondary standard, including, but not limited to, land use and transportation controls;
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> * * *
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> (D) it includes a procedure, meeting the requirements of paragraph (4), for review (prior to construction or modification) of the location of new sources to which a standard of performance will apply;

Section 110(a)(4) provides:

> The procedure referred to in paragraph (2)(D) for review, prior to construction or modification, of the new location of new sources shall (A) provide for adequate authority to prevent the construction or modification of any new sources to which a standard of performance under Section 111 will apply at any location which the State determines will prevent the attainment or maintenance within any air quality control

> region (or portion thereof) within such State of a national ambient air quality primary or secondary standard. . . .

The extent and nature of the land use controls to be utilized in achieving desired air quality are not spelled out precisely in the Act nor is the legislative history particularly clear. The Clean Air Act Amendments as originally passed by the House of Representatives contained no particular provisions with respect to land use. However, the version adopted by the Senate did contain the land use and transportation control elements found in present Section 110. On page one of the report of the Senate Committee on Public Works it is stated:

> Land use policies must be developed to prevent location of facilities which are not compatible with implementation of national standards. 27 /

The report goes on to say (at pages 12-13):

> In addition to direct emission controls, other potential parts of an implementation plan include land use and air and surface transportation controls. These should insure that any existing or future stationary source of air pollution will be located, designed, constructed, equipped, and operated, . . . so as not to interfere with the implementation, maintenance, and enforcement of any applicable air quality standard or goal.

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27/ S. Rep. No. 91-1196, 91st Cong. 2d Sess. 1 (1970).

> The Committee acknowledges that this will require each region to make difficult judgments about the siting of facilities which may emit pollution agents, including decisions to prohibit the location of new sources which, although in compliance with Section 113, would contribute to violation of a regional air quality standard. These factors would necessitate long-term decisions of the character of the growth and development of such region.

In the debate on the Senate floor following the report by the Senate Committee on Public Works of the bill to the full Senate, Senator John Sherman Cooper, the ranking Republican on the Senate Public Works Committee, summed up the Senate bill as it relates to the ambient air quality standards by saying:

> Within nine months after standards are fixed, pollution sources must be inventoried in the entire country, hearings held, and a control plan must be developed - including emission requirements for sources, and whatever land use, traffic or other controls may be necessary. And these plans must accomplish the air quality standards within three years. It is at this point that States and communities must make economic decisions, and decisions on the future growth of their areas and the kind of life they want, in considering alternative means of achieving clean air. 28 /

As previously indicated, the House version of the Clean Air Act did not contain the land use provisions found in the Senate bill. In conference, however, the

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28 / 116 Cong. Rec.S32918, September 21, 1970.

Senate's view prevailed and the land use language found in Section 110 was made part of the law. In debating the conference version of the legislation, Senator Muskie present d a summary of the legislation on the Senate floor which said:

> Implementation of standards will require changes in public policy: land use policies must be developed to prevent location of facilities which are not compatible with implementation of national standards. States must review the location of every new stationary source before construction to assure no interference with attainment of the standards.
>
> Transportation policies must be developed or improved to assure that the impact of pollution from existing moving sources is reduced to the minimum compatible with the needs of each region. Construction of urban highways and freeways may be required to take second place to rapid and mass transit and other public transportation systems. Central city use of motor vehicles may have to be restricted. 29 /

Although the legislative history indicates Congress forsaw the use of land use and transportation controls, the legislative history is not particularly helpful in determining what kind of land use or transportation controls may or ought to be required. The language of Section 110 simply states that land use and transportation controls may be required "as may

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116 Cong. Rec.S42384, December 18, 1970.

be necessary."[30] The issue then arises as to what kind of controls EPA can require local air pollution control agencies to consider or implement, or which EPA can impose itself in its direct implementation of Clean Air Act standards.

### 4. Possible Land Use Control Mechanisms

a. Air Quality Districts. One possible mechanism to relate land use more closely with air quality control mechanisms would be the establishment of more narrowly defined air quality control regions or districts. The Senate Public Works Committee report accompanying the Senate version of the Clean Air Act amendments indicated the delineation of regional boundaries should be determined on the basis of meteorological, topographical, and urban-industrial concentrations.[31] Many of the air quality control regions presently delineated cover broad areas encompassing widely varying air pollution levels and containing a variety of polluting sources. Consideration could be given to studying the existing air quality control region boundaries to determine whether it may be useful or advisable to break down the country into smaller and more narrowly defined districts for purposes of administration of air quality standards.

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[30] Clean Air Act §110(a)(2)(B).

[31] S. Rep. No. 91-1196, *supra* note 27, at p. 8.

The United States Court of Appeals decision in the Sierra Club case requiring EPA to disapprove state implementation plans which do not prevent significant deterioration of air quality would to some degree prevent air pollution control agencies in existing air quality control regions from achieving air quality standards in their particular regions as a whole by permitting trade-offs between relatively clean areas and polluted areas within the region. However, a narrower delineation of air quality regions, taking into consideration such factors as existing land uses, meteorological conditions, topography, population concentrations and other factors, may permit the designation of precisely defined air quality districts which would permit the more effective implementation of air quality standards. This might also include the prohibition or encouragement of particular types of sources or uses because of existing pollution conditions.

Section 107 of the Clean Air Act continues the designations of air quality control regions which existed prior to enactment of the Clean Air Act Amendments of 1970. Furthermore, it is stated that any portion of a state which is not in one of the previously designated air quality control regions would be an air quality control region. The Administrator is also given authority to designate as an air quality control region

> . . . any interstate area or major intrastate area which he deems necessary or appropriate for attainment and maintenance of ambient air quality standards. 32 /

This section would appear to permit EPA some flexibility in delineating air quality control regions on a basis which might lead to more effective administration of the Act and implementation of air quality standards. Further breakdown of air quality control regions into smaller districts for purposes of administration could also be required under Section 110 which requires states to prepare appropriate implementation plans.

b. Emission Density Zoning. Another technique for relating land use controls and achievement of air quality standards which has been considered to some extent by EPA is the concept of "emission density zoning." This would entail the designation of various districts to which would be assigned allowable levels of pollution density. A process comparable to development of a traditional zoning map would divide a jurisdiction into various districts in which certain uses would be permitted or

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32/ Clean Air Act §107(c).

prohibited. No construction could take place within a district which would result in emissions causing the assigned emission densities to be exceeded.

An emission density zoning program would encounter a number of possible legal objections, the primary one being based on the equal protection clause of the Constitution. If an arbitrary level of emission density is established for an area and any one or few parties is permitted to undertake development which will utilize all or most of the allowable emissions for the entire district, owners of remaining parcels may be left with little or no allowable emissions thereby effectively reducing the opportunities they have to develop their land. Depending on the method used to arrive at the allowable emission densities and the opportunities various landowners would have to protect their own rights to develop their property, such a program could run into serious difficulties in that a few property owners in a district would be able to effectively preempt the rights of all other property owners to develop their property.

Among the possible variations would be a system of transferable emission rights. Various parcels within a particular emission density district would be assigned levels of allowable emission density. Owners of parcels could either undertake construction which would use up the allowable emission density or they could sell their allowable emission rights to other landowners who could accumulate sufficient emission rights to construct a facility which might exceed the allowable emissions for any one particular parcel. The person selling his emission rights would then be prohibited from undertaking any construction which would result in emissions exceeding any of his remaining rights, if any. Utilization of a concept of transferrable emission rights might be one way of avoiding some of the legal and constitutional problems in limiting the allowable emissions from particular pieces of property. However such a system has never been tried and it is impossible to estimate the administrative problems and costs that would result.

The California Air Resources Board issued a report in August, 1973 in which it recognized the need for relating air pollution control to land use and transportation planning.[33/] Legislation was proposed (which has been introduced in the California Senate as Senate Bill No. 1543) which would authorize the California Air Resources Board to establish emission limits for each pollutant in each air

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[33/] A Report to the Legislature on Guidelines for Relating Air Pollution Control to Land Use and Transportation in the State of California, California Air Resources Board, August, 1973.

basin in the State for which there is an active Basinwide Air Pollution Control Coordinating Council. Each such Basinwide Council is to subdivide its air basin into subdivisions and develop emission limits for each subdivision. The subdivisions are to be based on areas subject to jurisdiction of planning agencies if practicable. Local governments within the basins are then to prepare general plans, regional land use plans and regional transportation plans which must be reviewed and approved by the relevant Basinwide Council.

A variety of other implementing amendments are included in the proposed legislation designed to assure that development inducing air pollution cannot be undertaken without a permit which assures that emission limits established for individual air basin subdivisions are not exceeded. No permit for construction, operation, sale, rental or use of any article, machine or other contrivance which may cause air pollution may be issued if the established emission limits would be exceeded or if the city or county in which the source is to be located does not have a general plan approved by the Basinwide Air Pollution Control Coordinating Council.

The California legislation is at this stage merely proposed legislation. Furthermore, it does not provide any system of transferrable development rights. However, it represents one of the very early efforts to implement a form of emission density zoning and its progress warrants observation.

c. Locational Performance Standards. Rather than applying some form of districting or mapping concept as suggested above to all types of polluting sources, EPA could adopt a somewhat more limited approach by implementing Section 110(a)(2)(D) and Section 110(a)(4). This would involve adoption and implementation of a program relating the matter of location to particular sources of pollutants such as power plants, cement plants, smelters and other major sources of air pollution. Such a program would entail coordination of the emission standards developed pursuant to Sections 111 and 112 with the implementation plans developed under Section 110 for the purpose of identifying the types of sources for which locational controls would be applied and the most effective ways of applying the locational controls.

A variety of factors could be taken into account in the implementation of such a locational control program. For example, direct sources could be subject to standards which would encourage location near types of development which would be less affected by emissions than would other types of development with higher associated concentrations of population, such as residential development. Direct sources also could be encouraged to scatter in particular directions because of the proximity to transportation networks, related industries, topographical conditions, or other factors which could have the effect of reducing the overall impact of a source on the surrounding environment.

Another basis on which EPA could make more effective use of its land use authority is to relate the location of sources as suggested above to particular meteorological conditions. Information as to prevailing winds in a particular area, the strength of those winds, frequency of rainfall, average humidity and other meteorological factors may be a substantial determinant on the impact of a particular polluting source on the environment surrounding that source. For example, when it can be established that prevailing winds in a given area are out of the west, it makes more sense to locate a new copper smelter or incinerator at the east edge of a town rather than at the west edge, all other factors being equal.

d. New Source Review. In implementing the new source review requirements of Section 110, the location of sources could be related to air quality control. The most obvious and common method for dealing with the review of polluting sources is to require a permit from the local air pollution control agency before construction or operation may be undertaken. This would, require identification of the kinds of sources for which permits will be required as well as some delineation of the standards to be applied in determining whether and under what conditions to issue a permit.

The procedure and criteria for issuing permits can vary substantially. For example, new source review could be limited to simply reviewing a proposed new source to assure that any applicable emission or performance standards will be complied with and construction will not violate applicable air quality standards including the significant deterioration standard. Such a procedure may or may not take into account matters of location and land use.

On the other hand, new source review could readily combine consideration of air quality standards and emission and performance standards with land use considerations as suggested above.[34] The basic issue facing

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[34] See *supra*, pp. 41 *et seq*.

EPA in determining the best approach to new source review is the extent to which EPA will permit local air pollution control agencies to simply react to initiatives of builders and developers of polluting sources or will require local air pollution control agencies to take some affirmative steps in guiding or channelling development of polluting sources.

A simple permit procedure reviewing new sources for consistency with national air quality standards and performance standards may do little more than authorize construction of polluting sources on a first-come, first-served basis. New sources which meet relevant performance standards would be permitted to be constructed and operated until such time as those sources use up the allowable emission limitations before the national ambient air quality standards or the significant deterioration standard prohibit introduction of further pollutants. At the other extreme, EPA might require local air pollution control agencies to identify the kinds of development which are likely to come about or be required in the indefinite future and to prepare a plan designating the most appropriate sites for various types of new sources within the area subject to jurisdiction of the agency. Somewhere in between these two extremes could fall the implementation of a program such as emission density zoning or a more refined districting program which would identify areas where given levels of pollution would be permitted without necessarily designating the type of development which would be permitted within those limits.

e. Controls Over Waste Products From Air Pollution Control Technology. Sources of air pollution which utilize various kinds of control technology may in many instances accumulate large quantities of materials which have been removed from stack emissions and which must be disposed of. For example, incinerators and power plants with stack precipitators and devices for removing sulfur dioxide may well accumulate large quantities of fly-ash particulates and various sulfur compounds. It apparently has not been the practice of EPA to give substantial consideration to the question of how air pollution sources can dispose of these solid wastes. Although there is no specific authority under the Clean Air Act authorizing EPA to impose conditions on operators of air polluting sources, it must be recognized the Clean Air Act is but one of a number of environmental protection and control acts administered by EPA.

There would seem little question implementation of a permit program with respect to new sources would include authority to impose reasonable conditions in a permit relating to the subject matter of the permit. Operators of polluting sources are also required to comply with any applicable provisions under the Water Pollution Control Act or other environmental programs which may be applicable to the disposal of solid or liquid wastes. Since it is compliance with Clean Air Act requirements which leads to the necessity of disposing of wastes, the imposition of conditions in a permit requiring the operator of the source to dispose of any waste products resulting from the employment of air pollution control technology in a manner consistent with the Water Pollution Control Act or other applicable environmental program should be sustainable. If the operator of an air pollution source fails to comply with any other applicable disposal requirements, it would not be unreasonable to require the shutdown of operation of the source until such time as the operator disposes of waste materials in a manner consistent with other applicable federal laws.

## C. Performance Standards for New and Existing Stationary and Hazardous Sources.

1. Current Regulatory Program. In addition to its authority to establish national ambient air quality standards and approve state implementation plans to achieve and maintain those standards, EPA is charged with establishing

"standards of performance" for new stationary sources of air pollution such as power plants, incinerators, smelters, Portland cement plants and other such sources.[35] Whereas the air quality standards are designed as a limit on the amount of given pollutants to be permitted in the air in a given area, emission standards are limitations on the amount of pollutants which may be discharged from a specific source.

EPA is also responsible for developing national emission standards for hazardous air pollutants.[36] When a hazardous pollutant has been identified and national emission standards are issued, no person may emit that pollutant anywhere in the United States in violation of the standard. Thus far, EPA has identified and proposed standards for asbestos, beryllium and mercury.[37]

All other new and existing sources of air pollutants are subject to performance standards established pursuant to Section 111 of the Act with the standards being based on the degree of emission limitations which can be achieved by using the best emission control system which has been adequately demonstrated taking into account the cost of achieving the reduction in emissions.[38] After EPA has established performance standards for new sources or emission standards for hazardous air pollutants, each state may develop and submit to EPA a proposed procedure for implementing and enforcing such standards.[39] Such a procedure will normally involve use of a permit system requiring a person seeking to construct a facility covered by the standards to obtain a permit before commencing construction or operation of the source. If EPA finds the proposed state procedure is "adequate" EPA is to delegate its authority to the state to implement and enforce the performance standards.[40]

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[35] Clean Air Act §111.

[36] *Id*. at §112.

[37] 40 C.F.R. 61, 38 Fed. Reg. 8820, April 6, 1973.

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[38] Clean Air Act §111(a)(1). Performance standards have been issued for a number of sources including fossil-fueled steam generating plants, sulfuric and nitric acid plants, incinerators and Portland cement plants. 40 C.F.R. 60, 36 Fed. Reg. 24876, Dec. 23, 1971. These standards specify emission limitations for particulates, sulfur dioxide nitrogen oxides and sulfuric acid mist as well as limits on visible emissions.

[39] Clean Air Act §111(c) and §112(d).

2. Locational Factors in Siting of Sources. EPA's current regulations for control of emissions from polluting sources require the removal of pollutants or the limitation of the amount of pollutants emitted into the atmosphere.[41] These regulations can have an impact on land use as they may determine that a particular source may or may not be built. However, the regulations deal solely with the technology for removal or reduction of emissions from stacks and matters of land use are not taken into consideration in determining the type of technology to be utilized. It has been argued that a variety of other possible

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[40] In addition to programs for control of emissions from new sources EPA is to prescribe regulations establishing a procedure similar to that provided under Section 110 (state implementation plans) pursuant to which each state is to submit to EPA a plan for establishing emission standards for existing sources (as opposed to new sources) for any air pollutant for which air quality criteria have not been issued but to which a performance standard under Section 111(b) would apply if the existing source were a new source. Such a plan must also provide for implementation and enforcement of such standards. In the event a state fails to submit a satisfactory plan to implement and enforce emission standards for existing sources, Section 111(d) authorizes EPA to prescribe a plan for any such state.

[41] See 40 C.F.R. 61, 38 Fed. Reg. 8820, April 6, 1973, and 40 C.F.R. 60,36 Fed. Reg. 24876, December 23, 1971.

techniques could be utilized to reduce the impact of particular polluting sources including the scattered siting of stationary sources over wider areas, utilization of taller emission stacks or intermittent controls (e.g., operating a polluting source only during periods of high wind velocity so that pollutants will be quickly dispersed), or the location of a source in particular areas which can absorb greater emissions because of atmospheric dispersion characteristics of the areas.

Existing regulations with respect to performance standards for stationary or hazardous sources do not take into consideration the differences in meteorological or topographical conditions in the area in which a particular source may be located. For example, the impact on the environment and on the human population of a coal-fired electric generating station, both from the point of view of particulates and sulfur oxides, may be entirely different depending on the location of the power plant. Wind and moisture characteristics of different areas vary greatly depending on factors such as proximity to large bodies of water, topography, relationship of the area to the prevailing wind currents as well as others. Thus, the impact of emissions from a source located in a valley where winds tend to be light and/or the humidity tends to be high may well pose a more substantial threat to the environment in the area of that plant than if the plant is located in an open and drier area where wind currents tend to be stronger.

The topography also plays a part. The location of a polluting source in an area such as Los Angeles which is subject to thermal inversions because of the topography of the area is likely to have a more serious impact on the surrounding environment than if that source is located on a high plateau or in a broad flat open area. Of course, the topography and meteorology of a particular area are related so it may be difficult in many situations to isolate one factor from another in trying to determine which factors were worthy of greater consideration. Furthermore, proximity of sources to population concentrations would also appear an element which might be taken into consideration in developing emission standards.

Section 111(a)(1) provides that the term "standard of performance" refers to a standard of emissions which reflects "the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction) the Administrator determines has been adequately demonstrated" (underlining added). In order to properly take into account the cost of achieving emission reductions one must look not only to the cost of the technology in relation to the benefits to be achieved in its use, but also to the cost to a community of implementing a particular standard of performance. This cost would be measured not only in terms of the dollar impact on the industry or other source of installing the control technology but also in terms of the costs imposed on the surrounding environment by emissions from the polluting source.

The costs associated with the impact of emissions from a particular source on the environment will vary greatly depending on the land use patterns of the surrounding area. A determination can be made of the relative costs of requiring various levels of pollution control with respect to particular types of sources and the area surrounding such sources. If areas with particular meteorological or topographical conditions can be identified which will have a substantially greater ability to absorb polluting emissions without substantial damage to the surrounding environment, it may well be that standards of performance can take into account the varying meteorological and topographical conditions.

Section 112 dealing with hazardous air pollutants does not contain the same language with respect to cost as is found in Section 111. However, in Section 112(b)(1)(B) it is provided that "the Administrator shall establish any such standard at the level which in his judgment provides an ample margin of safety to protect the public health from such hazardous air pollutants." This standard would again appear to leave a degree of flexibility with EPA to determine when a particular pollutant may be hazardous to the public health. Whether or not emissions from a particular plant are hazardous could again depend on the particular meteorological and topographical conditions in the area as well as the proximity of the source to human habitation or agricultural areas.

It may also be feasible to develop performance standards which may require operation of a polluting source in different ways depending upon particular conditions at any given point in time. Thus, a plant operating in an area which is subject to strong wind currents in a prevailing direction may well be subject to one aspect of a standard applicable when winds are in fact blowing in the prevailing manner. However, if winds shift to another direction the standard of performance may require closing down a plant to avoid danger to some particular area.

In addition to factors such as meteorological conditions, topography or proximity to population concentrations, attention to the location and proximity of one polluting source to another may also be advisable since the manner in which pollutants will react with each other may affect air quality. For example, a given level of emissions from a copper smelter and a coal-fired power plant when taken individually may not cause the kind of damage to the surrounding environment as would the location of those two sources in close proximity to each other. Where the plants are in close proximity, the emissions from the smelter when combined with the sulfur oxides or particulates from the power plant might produce reactions of pollutants which would be more damaging than the individual pollutants by themselves.

Standards might be developed which take proximity of sources into consideration. For example, the emission standard for a copper smelter with no other polluting sources within a radius of one half mile may not be quite as stringent as the standard for that same smelter if another source emitting a pollutant which will react with emissions from the smelter is close by. The advisability of developing standards along this line would, of course, depend on the identification of pollutant reactions which would warrant special treatment.

Effective implementation of performance standards based on land use conditions as well as control technology will require land use controls. Thus, if a utility obtains a permit to construct a coal-fired power plant in a particular area because meteorological and topographical conditions in the area are such that a somewhat greater amount of emissions can be tolerated than would be true under other circumstances, the agency issuing the permit ought have sufficient authority over land use to preclude future development which might affect or be affected by, or might provide emissions which might react with, emissions from the power plant.

Under Section 111(c) and 112(d), EPA is to approve state procedures for implementing and enforcing standards of performance for new sources or for hazardous air pollutants from stationary sources if EPA finds the state procedure is "adequate." If the air pollution control agency has no direct influence or control in land use decision-making processes, it would essentially lead to a first-come, first-served administration of the permit program as the control agency would issue permits to the first parties applying who would meet applicable air quality standards but would reject later applicants because the standards could no longer be met.

On the other hand, if emission standards are developed which include consideration of land use elements, state programs which do not provide sufficient controls over land use would be inadequate. This might require the local agency to undertake land use and growth studies on its own to enable it to provide some direction to development or it could involve a form of coordination between the air pollution control agency and other existing relevant planning and land use control agencies. While this coordination could take various forms, the basic idea would be to prevent any land development which could result in conflicts with air pollution control programs. Similarly under Section 111(d), EPA could require states submitting plans for implementation and enforcement of emission standards from existing stationary sources to contain sufficient land use control elements to implement any land use aspects of emission standards.

## CHAPTER IV

## EPA AUTHORITY TO IMPOSE LAND USE CONTROL REQUIREMENTS UNDER THE FEDERAL WATER POLLUTION CONTROL ACT AND MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT

Efforts on the part of the federal government to deal with problems of water pollution go back to the 19th Century. The Rivers and Harbors Act of 1899 required a permit from the Army Corps of Engineers before any refuse (other than storm water runoff) could be discharged into any navigable waterway of the United States or any tributary thereof.[1] With the rising demand for protection of the environment in the decade of the 1960's, a number of water quality improvement laws were enacted culminating with the Federal Water Pollution Control Act Amendments of 1972[2] which replaced previous water pollution laws and provided a more comprehensive program for water pollution control and abatement.

Under the 1972 law, EPA is to attack the problem of water pollution by developing water quality standards and limitations on permissible effluents which may be discharged into the nation's waters. States are to strive to achieve the standards and limitations by devising plans and programs for administering and enforcing the water quality and effluent standards, but if they fail to do so, EPA will undertake enforcement measures. EPA also is authorized to provide funds for research, development and implementation of programs to implement the Water Act, for the administration of anti-pollution programs, and for the construction of waste water treatment works. Grants for anti-pollution programs are conditioned on EPA's approval of a program for the prevention, reduction and elimination of pollution, Grants may be made for treatment works only if they are in conformity with applicable state standards and plans.

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[1] Rivers and Harbors Act of 1899, §13. See United States v. Republic Steel Corp. 362 U.S. 482 (1960).

[2] Pub. L. No. 92-500, 86 Stat. 816 (October 18, 1972), 33 U.S.C.A. §§1251 et seq. (hereinafter sometimes referred to as the "Water Pollution Control Act."

The 1972 Amendments also provided for a National Pollutant Discharge Elimination System (NPDES). All point sources discharging pollutants into navigable waters are required to have a permit issued either by a state under an EPA-approved NPDES program or by the EPA in those states which have no such program. Permitees must be found to be in compliance with all applicable standards.

## A. Water Pollution Control Grants

1. Pollution Control Programs. Pursuant to Section 106 of the Water Pollution Control Act, EPA is

authorized to make grants to states and to interstate agencies to assist them in administering programs for the prevention, reduction and elimination of water pollution. Grants made under Section 106 are made on condition the state files a report of the current status of its pollution control program and "such additional information, data, and reports as the Administrator may require."[3] The state must also submit a program for control of pollution and there must not be in effect any federally assumed enforcement as defined in Section 309 of the Act.[4]

The conditioning authority in Section 106 is somewhat more narrowly defined than is the case under Section 105 of the Clean Air Act which authorizes EPA to make grants on such terms and conditions as it deems necessary. However, EPA is authorized to require "such additional information, data, and reports as the administrator may require," and pursuant to this authority, EPA could require states to give some consideration to how land use controls might be utilized to carry out the state's pollution control program. In addition, the report of the

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[3] Water Pollution Control Act, §106(f)(1).

[4] Id. at §106(f)(2) and (3). Section 309 permits EPA to undertake enforcement of Water Pollution Control Act standards and permit conditions where states fail to take appropriate action to halt violations.

Senate Committee on Public Works indicates that one of the elements introduced to implement the new amendments is the development of "controls for locating new discharge sources."[5] Continuing on, the report states:

> In addition to fiscal and other basic program requirements, the bill requires as a condition to Federal assistance compliance with elements essential to a high level of performance in State water pollution control programs. These elements include monitoring water quality, reviewing and regulating the location of new sources of discharge, setting priorities for waste treatment works construction, and procedures to assure non-degradation of water quality and, to assure no alteration of the quality of any waters which meet the objectives of this Act.

Thus, it is likely EPA could successfully impose conditions requiring states to have available adequate land use controls to regulate development which may affect water pollution before a grant would be made.

2. Construction of Treatment Works. Grants for publicly owned treatment works may be made by EPA pursuant to Section 201(g) of the Act. Section 204 outlines a number of conditions which must be met prior to approving any grant for publicly owned treatment works which include, among others, the following:

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[5] S. Rep. No. 92-414, 92nd Cong., 1st Sess. 19-20 (1971)

1. The works are included in any applicable areawide waste treatment management plan pursuant to Section 208.
2. The works are in conformity with any applicable state continuing planning process under Section 303.
3. The works have been certified by an appropriate state water pollution control agency as being entitled to priority over other works in the state pursuant to any applicable state continuing planning process pursuant to Section 303.
4. The size and capacity of the treatment works relates directly to the needs be served by the plant including sufficient reserve capacity as approved by EPA. [6]

In addition to the conditions set forth in Section 204, before any publicly owned treatment works may be operated, it must obtain a permit under the National Pollutant Discharge Elimination System. As discussed in a later portion of this report dealing with the NPDES system, a variety of conditions may be imposed on the issuance of a permit which can effectively require imposition and implementation of stringent land use controls by the public body seeking to obtain funds for construction of a treatment plant. [7]

a. Grant Conditions. May EPA impose conditions on construction grants which require state or local agencies to adopt and implement land use control programs for the area to be served by the waste treatment plant? If Section 208 or Section 303 plans are applicable to the particular treatment plant for which a grant is being sought, it would seem clear that conditions requiring an applicant to undertake such planning and control programs as are required under either of those plans could also be imposed as a condition to obtaining any grant under Section 201(g).

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[6] Water Pollution Control Act at §204(a).

[7] See *infra*, pp. 111-118.

However, Section 204(a) conditions the approval of grants to conformity with a Section 208 or 303 plan only if there is "any applicable" plan. If no such plans have been developed or approved, it would not appear EPA is precluded from approving a construction grant. Moreover, the lack of such plans would not appear to preclude EPA from imposing conditions requiring at least some consideration of land use controls and factors prior to authorizing a grant.

Section 204(a)(5) provides a grant may not be approved unless EPA determines that the size and capacity of the proposed treatment plant relate directly to the needs to be served by the plant including sufficient reserve capacity. Without adequate information and projections as to the type of growth and development occuring or likely to occur in an area to be served by a proposed treatment works, it may not be possible for EPA to make a determination that the size and capacity is sufficient. Thus, it would seem clear EPA has the authority to require an applicant to furnish information concerning the kind of development presently existing in an area and the growth and development which is projected for that area.

The question then arises as to whether pursuant to grant conditions EPA can require the public body seeking the grant to have sufficient land use and development controls so as to enforce a growth plan in the area to assure that the treatment plant capacity is not overloaded. Arguably, if no Section 208 or Section 303 plans are applicable, EPA would have no such authority as the Act does set out conditions and limitations on approving grants and there is no provision specifically authorizing EPA to condition a grant to the exercise of power by the applicant to control growth and development in the area to be served by the treatment works.

However, before any publicly owned treatment works may discharge any effluents into navigable waters of the United States, a permit under the NPDES program is required. As discussed later in this report, NPDES permits may impose conditions on public bodies owning treatment works requiring them to have and to exercise various kinds of land use control enabling them to implement and enforce growth plans for their particular areas.[8] Since the capability of exercising growth and development control can be made a prerequisite to operation of a plant to be constructed with a grant from EPA, there would appear to be a sound basis for concluding that the construction grant itself could be conditioned along the same lines as the NPDES permit could ultimately be conditioned.

b. Legislative History. Considerable concern is found in the legislative history for the need to develop alternative sewage disposal systems including land disposal. In discussing Section 201, the report of the Senate Public Works Committee states:

> The Committee has, therefore, included a requirement that Federal assistance for the construction of waste treatment facilities must require, where appropriate, practices which will recycle and reclaim water and provide for the contained or confined disposal of pollutants. This bill would establish a policy in concert with the fundamental ecological principle that, to the extent possible, all materials should be returned to the cycles from which they were generated. Properly managed, this means pollutants do not escape or migrate to cause degradation of the water, air or land environment.[9]

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[8] See *infra*, pp. 111-118.

[9] *S. Rep. No.* 92-414, *supra* note 5, at 23-24.

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> Land disposal systems to be effective must be designed and managed so that sewage is applied to the land at control rates, concentrations and proportions of pollutants, so that the character of the land and the plant life are not overtaxed or otherwise degraded. Properly designed land disposal of pollutants must include pretreatment to remove industrial and tox materials. [10]

The report of the House Committee on Public Works indicates a similar concern for research as to land disposal techniques.[11] In light of this history and the language in Section 201(g) requiring recipients of funds to demonstrate that alternative waste disposal techniques have been studied, it would appear EPA would have adequate authority to impose conditions with respect to disposal of sludge and other materials from the plant constructed with the funds. The authority might go so far as to require the recipient to have adequate authority to designate land for disposal of effluents in accordance with the results of its study and evaluation of alternative waste management techniques.

Whether EPA would want as a policy matter to go so far as to impose conditions at the grant stage similar to those it might impose at the permit stage is at this point an open question. Thus, it may be preferable, in situations where a planning process is not underway or approved, to condition grants to the undertaking of a planning program and the development of a control strategy which will ultimately provide the mechanism for assuring that treatment works constructed under federal grants are not overloaded. Following this approach, the agency involved would have an opportunity while construction is underway to make appropriate studies of the area under its jurisdiction to determine ultimate needs for sewage treatment capacity in light of projected growth and development and to come up with procedures for controlling growth and development so water quality and effluent standards can be achieved and maintained.

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[10] Id. at 25.

[11] H. R. Rep. No. 92-911, 92nd Cong., 2d Sess. 87 (1972).

Another issue which has been raised by some is whether construction grants may be conditioned on an applicant's showing of compliance with standards and criteria developed under other environmental control laws administered by EPA. Where the operation of a treatment plant may be subject to other environmental control laws, such as any odor requirements developed under the Clean Air Act or any applicable solid waste disposal guidelines under the Solid Waste Disposal Act, a good argument exists that EPA has authority to condition its grant to require compliance with such other applicable environmental controls. A waste water treatment plant can create odor problems and in removing waste material from waste water, solid and liquid wastes will have to be disposed of in some fashion. Thus, in operation of a treatment plant, it is possible standards developed under other pollution control acts will come into play because of construction and operation of the treatment plant under the Water Pollution Control Act. As the various acts would be related by virtue of the operation of the treatment plant, there would be a sound argument that conditions could be imposed requiring compliance with other environmental control laws which would come into play with respect to various operations of the plant.

A Congressional purpose to bring some degree of coordination between environmental programs in the control of water pollution can be seen in the provision of Section 511(c)(1) of the Water Pollution Control Act. This section requires the preparation of an environmental impact statement pursuant to the National Environmental Policy Act 12/ with respect to the grant of funds for a

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12/ 42 U.S.C.A. §4331, hereinafter referred to as "NEPA."

wastewater treatment plant and the issuance of a new source permit under the National Pollutant Discharge Elimination System.[1] Except for these two matters, environmental impact statements under NEPA are not required for EPA actions under the Water Pollution Control Act.

Although NEPA itself does not confer on EPA specific authority to impose environmental controls not already found in various other environmental control laws, the fact an environmental impact statement is required under NEPA with respect to waste water treatment plant grants and NPDES permits while not required with respect to other actions of EPA under the Water Pollution Control Act is a clear indication of Congressional intent that EPA give some consideration to the impact of its exercise of authority in these two areas in a manner transcending the scope of Water Act standards and objectives alone. With this intent in mind, it would seem incongruous if the authority of EPA to condition construction permits was so narrowly interpreted as to require an analysis of the overall environmental impact of the grant while precluding EPA from implementing standards developed pursuant to its authority under other pollution control acts by conditioning grants to assure implementation of those standards. This is particularly

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13/ See *infra*, pp. 109 *et seq*.

true where the grant will lead to operation of a treatment plant which may run into conflict with other pollution control programs.

Whether an applicant could be required to be in compliance with aspects of other environmental control laws not related to the operation of the plant is another question. For example, could EPA condition a waste treatment plant construction grant on the development by the public body of a plan for the review of new sources under the Clean Air Act where there is no particular relationship between the operation of the waste treatment plant and whatever new source standards might be developed under the Clean Air Act? As Congress has deemed it advisable to enact two separate pieces of legislation dealing with water and air pollution, unless there is some direct relation between the operation of a sewage treatment plant and air quality standards which would be applicable to that plant, EPA would be stretching its authority considerably to try to attach conditions to a water treatment plant construction grant which concern unrelated aspects of air pollution or other environmental control programs.

## B. Areawide Waste Treatment Management Plans

Congress authorized an intensive effort to deal with water pollution problems in areas with serious pollution control problems by directing EPA to develop and publish guidelines for the identification of those urban-industrial or other areas where substantial water quality control problems may exist.[14] An areawide waste treatment management planning process and plan for these areas is to be developed (hereinafter called an "areawide plan"). It anticipates municipal and industrial waste treatment needs, establishes construction priorities, regulates the location, modification and construction of any waste treatment facility in the area, and enforces procedures and methods to control various nonpoint sources of pollution.[15]

Once an areawide plan is approved, permits under the NPDES system may not be issued if they would conflict with the plan.[16] Likewise, once the plan is approved, EPA may not make grants for construction of municipal treatment works unless it is determined such works are included in the areawide plan.[17] The federal government may provide funds to assist in developing and operating a continuing areawide planning process.[18]

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[14] Water Pollution Control Act at §208(a).

[15] *Id*. at §208(b).

[16] *Id*. at §208(e).

[17] *Id*. at §208(d).

The importance of this section of the Act and the intention that it encompass the coordination of land use matters with environmental control is evidenced by the report of the Senate Committee on Public Works accompanying the bill originally passed by the Senate which is substantially in the form finally enacted:

> Perhaps the principal cause of inefficiency and poor performance in the management of waste in the metropolitan regions is the incoherent and uncoordinated planning and management that prevails in many areas of the Nation. Adjacent communities and industries are under no mandate to coordinate land use or water quality planning activities. This results in poor overall performance and the proliferation of many direct and indirect discharge sources into receiving waters. Such diffuse and divergent programs not only intensify pollution problems but they prevent the use of economies of scale, efficiency of treatment methods, and, most importantly, coherent, integrated and comprehensive land use management.
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> Consequently, the Committee has included in the bill a mechanism that would establish planning and management capability throughout each State. The mechanism is initiated by the Administrator who would set forth definitive criteria on those interstate and intrastate areas for which regional waste treatment management plans are to be developed.

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[18] Id. at §208(f).

> A regional planning mechanism will be ineffective if it does not provide an effective means of regulating all sources of pollutants within the region, and if it does not provide an overall management mechanism to assure implementation of any plan developed.
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> Uncontrolled growth and expansion and competition among units of government will be reduced if effective environmental controls are to be imposed. [19]

1. Necessity of Areawide Plan. Although there are provisions in the Water Pollution Control Act making permits or grants subject to consistency with any existing areawide plan, the question arises as to whether it is necessary under the Act to prepare areawide plans as preconditions to any other activities under the Act. The language of Section 208 is drafted in a mandatory form in that EPA "shall" publish guidelines for identification of areas having substantial water quality problems, and the governor of each state "shall" identify each such area and "shall" designate the boundaries of each area and an organization capable of developing an areawide plan. [20]

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[19] S. Rep. No. 92-414, *supra* note 5, at 36-37.

[20] However, there is no mechanism in the Act for any type of federal enforcement of the apparent requirements. In contrast, Section 303 requires states to adopt water quality standards applicable to intrastate waters; if

NPDES permits and construction grants must be in conformity with any "applicable" areawide plan, but if there is no plan there is no need to comply with a plan and a construction grant or permit may be issued. Thus, Section 208 plans cannot be considered mandatory preconditions to other actions under the Act and the failure of a state to promulgate areawide plans will not prejudice its rights under other provisions of the Act.

2. Content of Areawide Plan. Where areawide plans are developed pursuant to Section 208, the Act enumerates a number of items which must be included in the areawide planning process, including the following:

a. Identification of treatment works necessary to meet anticipated municipal and industrial waste treatment needs of the area over a 20-year period with annual updating, including any requirements for the acquisition of land for treatment purposes.

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20/ (cont'd.)
they fail to do so EPA is authorized to promulgate such standards. Water Pollution Control Act at §303(a). Also, states are required to have continuing planning processes under Section 303 and, if they do not, no state program for issuance of NPDES permits can be approved, with the result that permits for that particular state would be issued directly by EPA. Id. at §303(e).

b. Establishment of construction priorities for treatment works.

c. Establishment of a program to regulate the location, modification and construction of "any facilities" within the area which may result in waste discharges and to assure that industrial or commercial wastes discharged into treatment works meet applicable pretreatment standards.

d. Identification of measures necessary to carry out the plan including agencies to construct, operate and maintain office facilities required.

e. A process to identify various nonpoint sources of pollution related to construction activity, mining, agriculture and forestry including procedures and methods "including land use requirements" to control such sources to the extent feasible.

f. A process to identify and control salt water intrusion into rivers, lakes and estuaries. 21 /

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21 / *Id*. at §208(b)(2). Other requirements are also spelled out with the admonition that the planning process is not limited to the enumerated items.

Perhaps the most far reaching provision in Section 208 is the provision that any areawide plan is to include a program "to regulate the location, modification and construction of any facilities within such area which may result in any discharge in such area."[22] Taken literally, this phrase could be interpreted to refer to regulation of the location or construction of any building, such as a home or commercial building, which may result in discharge of wastes into navigable waters. The term "facilities" is not defined in the Act and there is no clear indication in the legislative history as to what the term was intended to encompass in this particular provision. Other uses of the term in the Act are in provisions which more clearly relate to waste treatment facilities[23] or other particular kinds of facilities such as research facilities.[24] The term "treatment works" is defined[25] and the use of the term "facilities" in the same section with the term "treatment works" would seem to indicate "facilities" has a somewhat broader meaning than the term "treatment works."

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[22] Id. at §208(b)(2)(C)(ii).

[23] E.g., Id. at §201(d) and (e) and §208(b)(2)(D).

[24] Id. at §104(h)(B).

[25] Id. at §212(2).

In light of the broad congressional purpose in enacting Section 208, there is strong indication the use of the term "facilities" was intended to encompass any facility which would result in any discharge in the navigable waters. This would encompass both municipal and private sewage treatment works as well as any other point sources of pollution.[26]

3. Potential Control Mechanisms for Areawide Plans. One method for regulating location of "facilities resulting in any discharge" would be to coordinate the traditional zoning, subdivision and planning processes with the areawide planning process to limit the amount and type of development in the area so existing and projected treatment works will not be overloaded.[27] Ideally, this could lead to an optimal planning process whereby growth and development could be accommodated by sewage treatment

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[26] The term probably was not intended to encompass single family residential developments or other facilities which are connected to municipal or private treatment systems as the term "discharge" is defined in Section 502(12) and (16) to refer to the discharge of pollutants into navigable waters from any point source.

[27] Such a process does raise the issue of whether sewage treatment capacity is designed to meet expected growth and development or whether growth and development are limited to avoid overload of sewage treatment capacity. See Golden v. Planning Board of Town of Ramapo, 285 N.E.2d 291 (N.Y. 1972) and cases and authority cited therein at 302-303.

facilities to the extent permitted consistent with water quality standards and effluent limitation capabilities, but this ideal requires a massive coordination of local planning and zoning controls far beyond what is now found in most regions.

Somewhat less comprehensive but equally experimental methods might also achieve the primary purpose of Section 208. One such method would be a program assigning a limit on the amount of allowable effluents which may be discharged from each parcel of land. Such a program would take into account such factors as the suitability of the soil for installation of septic tanks, available sewage treatment capacity and existing water quality in the area. No person would be permitted to undertake any development which would be expected to result in effluents in an amount greater than the allowable limit. Some flexibility could be built in by allowing the transfer of effluent limitations from one parcel to another so a developer in need of a higher effluent limit than is assigned to his parcel could purchase or otherwise acquire additional rights to discharge effluents. This would mean the owner of a parcel selling his effluent rights would be further limited or precluded from undertaking any development resulting in effluents.

Such a procedure would not necessarily entail any particular planning as to what kind of development would occur at any particular point in the area. Rather, a developer could undertake a project anywhere land can be found and sufficient effluent rights accumulated. However, this process is founded on an assumption (which may be hard to sustain) that the maximum level of effluents which can be accommodated may be discovered and fairly spread around parcel by parcel. An effective ceiling is placed on development which may be quite arbitrary. Legal objections would be ameliorated to some extent by giving landowners the right to transfer or acquire effluent rights so each owner would have an opportunity to undertake development either within the limits assigned to his land or such other limits as he can acquire. Of course, once all effluent limits for an area are used up by the first developers, later development may be precluded or limited.

A Section 208 process could also limit its regulatory efforts to those developments which will discharge effluents directly into waterways and not be concerned with development which will be connected to municipal or private sewage treatment systems. Such a process would proceed on the theory that control of development which will be connected to sewage treatment systems can be handled through the NPDES process and the Section 208 process need only be concerned with effluents not discharged into such treatment systems. Under such a process, a developer or operator of any facility discharging directly into navigable waters, which could include a home utilizing a septic system, would obtain a permit by filing a statement regarding the amount of effluents to be generated by the facility. Permits would be issued on a first-come, first-served basis so long as all water quality and effluent standards could be met.

### 4. Section 208 and Nonpoint Source Pollution.

Another aspect of pollution to be considered in areawide plans is nonpoint source pollution. Guidelines for the control of nonpoint source pollution are to be developed by EPA pursuant to Section 304(e) and areawide plans are to contain "procedures and methods (including land use requirements)"[28/] for control of nonpoint sources. Nonpoint controls might be encompassed in any of the programs suggested above for inclusion in areawide plans although the greater difficulties in identifying and controlling nonpoint sources as opposed to point sources may make it advisable to establish a separate control procedure.

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[28/] Water Pollution Control Act at §208(b)(2)(G)(H) and (I).

One possible procedure would be to establish standards of performance which various types of nonpoint sources would be required to comply with. The Section 208 agency could identify the various types of nonpoint sources requiring exercise of pollution controls and develop standards and guidelines with which operators of a source would have to comply. Such standards and guidelines need not spell out measures the operator would have to take to meet the pollution limitations. However, if an operator fails to meet the applicable standards of performance, the agency would be authorized to require the operator to cease operations and/or to take such steps as may be necessary to end the pollution problem.

A second approach would be to implement a program requiring the operator of a nonpoint source to obtain a permit before undertaking any specified activities likely to lead to nonpoint source pollution. The operator would be required to outline all steps to be taken to assure that nonpoint source standards are not violated.

As a part of either of these procedures, EPA could establish guidelines to assist local agencies in identifying areas which would not be suitable, either in general or in some particulars, for nonpoint source development. For example, strip mining on certain slopes may present such nonpoint source pollution problems to warrant a general standard forbidding strip mining on any slope over a certain degree. On the other hand, other farming or timbering activities may be permitted in such an area with appropriate precautions.

5. Section 208 Agency. As Section 208 was enacted for the purpose of providing comprehensive planning in areas with serious pollution control problems, the question arises as to what ought to be the relation between a Section 208 agency and other state, regional and local land planning agencies. The Act requires the areawide agency be a "single representative organization, including elected officials from local governments or their designees."[29/] Many states have established regional planning bodies which may include elected officials and may meet the requirements of §208(a)(2)(B). In addition to the Section 208(a)(2) requirements, an areawide agency must have authority, among other things, "to carry out appropriate portions of an areawide waste treatment management plan developed under subsection (b) of this section."[30/] Absent such authority, EPA may reject the designation of the agency until such time as the deficiency is corrected.

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[29/] Id. at §208(a)(2).

[30/] Id. at §208(c)(2)(A).

Although EPA could presumably ignore the existence of other land use planning agencies at the state, regional and local levels to determine if a designated agency had the appropriate representation and authority, the scope of Section 208, as evidenced by the scope of its language and legislative history, is to provide comprehensive planning for designated areas. Thus, the Congressional objective is more likely to be attained if existing state, regional and local land planning and control agencies are in some manner coordinated with the Section 208 agency. If the Section 208 agency is an existing agency which is already coordinated to some extent with other agencies, this may not be a serious problem. However, there are few regional agencies in the United States which have the scope of responsibility and authority required under Section 208 which are also well coordinated with other state, regional and local agencies impacting on land use decision making processes.

With the choice of the areawide agency to develop and administer areawide plans left to the states, EPA is in the position of having to accept or reject the choice without authority to designate the appropriate agency. A degree of coordination between the Section 208 agency and other agencies dealing with land use issues might be achieved, however, by requiring the Section 208 agency in preparing its plan to consult with other state and local planning agencies and reporting to EPA how the areawide plan conforms to plans developed by other land use agencies explaining any inconsistencies together with procedures for resolving inconsistencies.

## C. Water Quality Implementation Plans.

Prior to enactment of the 1972 amendments, many states had developed water quality standards applicable to interstate waters within each particular state which had been approved by the federal government. Under the prior law, the federal government had established guidelines and criteria to assist states in developing the water quality standards. Each state determined which portion of the interstate waters within its boundaries would be ear-marked for particular kinds of use such as drinking water or industrial cooling. Federal regulations required that no body of water be classified for a use which resulted in a lower level of purity than already existed.[31/] This was, in effect, an anti-degradation policy. A second

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[31/] U.S. Department of the Interior, Guidelines for Establishing Water Quality Standards for Interstate Waters (1966) at p. 4, Guideline 1; See Action for Environmental Quality, EPA (1973) at p. 12.

groundrule was that no body of water would be designated only for use for waste disposal.[32]

Water quality standards adopted by states prior to the enactment of the 1972 amendments which were approved by EPA are still applicable under the new law.[33] In addition, states which may have adopted standards applicable to intrastate waters may submit those standards for approval to EPA.[34] States which had not adopted standards for intrastate waters are to adopt standards and submit them for approval by EPA.[35] If a state fails to prepare appropriate standards, EPA is authorized to prepare such standards and impose them on states.[36] In establishing such standards, the use and value of waters for public water supplies, navigation, propogation of fish and wildlife, and recreational, agricultural and industrial purposes must all be considered. It is important to note the water quality standards developed under the 1972 law are applicable to all waters in the United States and not only to interstate or "navigable" waters as that term had previously been interpreted.[37]

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[32] *Id.*, Guideline 1; p. 5.

[33] Water Pollution Control Act, §301(a)(1).

[34] *Id.* at §301(a)(2).

[35] *Id.* at §301(a)(3).

[36] *Id.* at §303(b).

To prevent further degradation of the bodies of water already subject to a high degree of pollution, states are also required to identify those waters within their boundaries for which effluent limitations alone developed under the Act are not stringent enough to implement the applicable water quality standards. For such waters the total maximum daily load of pollutants which may be permitted must be established, with procedures for limiting effluents to the maximum allowable load consistent with the protection and propagation of shellfish and wildlife.[38]

EPA is further required to develop and publish information on factors necessary to restore and maintain the chemical, physical and biological integrity of all navigable waters, groundwaters, and ocean waters as well as on what must be done to protect shellfish, fish and wildlife and to allow recreational use of various water bodies.[39]

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[37] Id. at §502(7) ("The term 'navigable waters' means the waters of the United States, including the territorial seas.").

[38] *Id*. at §303(d).

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[39] *Id*. at §304(a). Effluent limitations are to be developed under the 1972 Act which will be based on "application of the best available demonstrated control technology. . . ." (*Id*. at §306(a)(1)) EPA is directed to establish national standards of performance for new sources within each of a number of categories specifically listed in the statute and such other categories as may be included by EPA. The categories covered by the statute include pulp and paper mills, meat product and rendering processing, sugar processing, textile mills, feedlots, chemical manufacturing, petroleum refining, various iron, steel and other nonferrous metals manufacturing and a variety of other industries. In establishing these federal standards of performance for new sources, EPA is to consider the cost of achieving the effluent reduction any any non-water quality environmental impact and energy requirements. (*Id*. at §306(b))

EPA is also to develop guidelines for determining effluent limitations for *existing* sources which identify the degree of effluent reduction (in terms of the amount of pollutants and the chemical, physical and biological characteristics of the pollutants) attainable through the application of the "best practicable control technology currently available for classes in categories of point sources" and to specify factors to be taken into account in determining which control measures and practices are to be applicable to point sources. (*Id*. at §304(b)(1)) These factors may include consideration of the cost of application of technology in relation to the benefit achieved in the effluent reduction. The degree of effluent reduction attainable through the application of "the best control measures and practices achievable" and control measures and practices available to eliminate discharges are also to be identified. (*Id*. at §304(b)(1)) To achieve effluent limitations required by the Act, industrial pollutant sources are required to apply the "best practicable control technology currently available" not later than July 1, 1977 and the "best available technology economically achievable" not later than July 1, 1983 for discharges are into the nation's waters. (*Id*. at §301(b)) Where the industrial pollutant is discharged into a publicly owned treatment works, the industry must comply with pretreatment standards developed by EPA. (*Id*. at §307(b)) Publicly owned treatment works are required to utilize the best practicable control technology for reducing effluents not later than July 1, 1983.

To enforce the water quality standards adopted under the Act, each state is to develop a continuous planning process which is submitted to EPA for approval, [40] if EPA finds it will result in plans for all waters of the state which include effluent limitations at least as stringent as Federal effluent limitations (including national standards and toxic and pretreatment effluent standards) and any requirements contained in any applicable water quality standards in effect under the Act. In addition, the planning process must include, among other things, adequate implementation (including schedules of compliance) for new or revised water quality standards, controls over disposition of all residual waste from water treatment processing and elements of any applicable areawide waste management plans developed under Section 208. [41]

Under the regulations promulgated by EPA, the total state planning process is based on individual water basin plans which divide individual water basins into segments, defined as that portion of a water basin the surface waters of which have common hydrologic characteristics, common natural, physical, chemical and biological processes and

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[40] Id. at §303(e).

[41] See Id. at §§301(b), 303(e), 306 and 307.

common reactions to external stresses such as the discharge of pollutants. Segments are classified as "water quality" and "effluent limitation" for specific application of water pollution control measures. A "water quality" segment is any segment where it is known that water quality does not meet applicable water quality standards and will not do so even after application of federal effluent limitations. An "effluent limitation" segment is any segment where water quality either meets or will meet applicable water quality standards after the application of federal effluent limitations.[42]

The water planning process is also required to be coordinated with other applicable state and local land use and natural resources plans for the basin.[43] No provision is made in the Act authorizing EPA to develop a planning process if a state fails to do so, but the Act does provide that no state program for issuing permits for the discharge of effluents may be approved by EPA is a state does not have an approved planning process.[44]

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[42] 40 C.F.R. 130, §§130.2 and 130.11, 38 Fed. Reg. 8034, March 27, 1973.

[43] 40 C.F.R. §130.22.

[44] Water Pollution Control Act at §208(a).

1. Relationship of Water Quality and Land Use. Questions of land use are inextricably interwoven with the requirement that plans be developed to implement water quality standards, as is explicitly recognized in Section 208, for if basin plans do not take land use into consideration, it will not be possible to effectively implement a strategy to achieve and maintain water quality standards approved by EPA.

Although Section 303(e) does not contain the same kind of language found in Section 110 of the Clean Air Act specifically authorizing the inclusion of land use controls in state implementation plans, the conclusion is inescapable that land use controls can and should be an element in Section 303(e) plans. Without the ability to plan and control where point and nonpoint sources of pollution will be permitted to operate and where land sites for disposal of pollutants will be located, achievement of the objectives of the Act may be impossible. The report of the House Committee on Public Works in at least two places emphasizes the need to consider land disposal as one of the techniques for dealing with pollution.[45/] In discussing Section 201 dealing with construction grants, the report states:

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[45/] H.R. Rep. No. 92-911, 92 Cong., 2d Sess. (1972).

> In arriving at the best practicable waste treatment technology consideration must be given to its full environmental impact on water, land, and air and not simply to the impact on water quality.
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> * * *
>
> In defining "best practicable waste treatment technology" for a given case, consideration must be given to new or improved treatment techniques which have been developed and are now considered to be ready for full-scale application. These include land disposal, . . . 46 /

Again, in discussing the provisions of Section 304 relating to alternative techniques for implementing the Section 301 effluent limitations, the House Committee repeats the importance of land disposal techniques:

> The Committee intends that the Administrator shall emphasize land disposal techniques. If the goal of eliminating the discharge of pollutants into our Nation's waters is to be achieved, land disposal of the waste from treatment works will be necessary. 47/

Control simply over technology employed by point sources or methods of operation utilized by operators of nonpoint sources will not provide EPA with an ability to deal with land disposal techniques, nor will it permit EPA any control over the proximity of various sources to one another. One of the purposes in making grants to states to assist

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46 / *Id*. at 87.

47 / *Id*. at 108.

in carrying out water pollution control programs was to assist in development of "controls for locating new discharge sources."[48] Implementation of these kinds of concerns must be through the planning process developed pursuant to Section 303 and EPA must have authority to require states to take a look at or establish land use or growth plans. Without this broader review of land development to plan and determine to some degree the location of point and nonpoint sources of pollution and alternative land disposal sites, it is highly unlikely water quality standards can be achieved and maintained.

Congress recognized general effluent limitations alone might be insufficient to achieve water quality and thus enacted Section 302 authorizing EPA to develop "water quality related effluent limitations" which could involve technological controls "or other alternative control strategies." In addition, the inadequacy of general effluent limitations established pursuant to Section 301(b)(1) to implement water quality standards applicable to particular waters is illustrated in the Section 303(d) requirement that states identify such waters, establish a priority ranking and establish the maximum permissible daily load of pollutants. If EPA approves the state's identifications, priority rankings and daily loads, the state must incorporate those into its current implementation plan. The question is then presented as to what kind of land use controls EPA can require be made part of a continuing planning process.

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[48] S. Rep. No. 92-414 , supra note 5 at 19.

2. Possible Land Use Control Elements in Planning Process

a. Load Allocation Plans. EPA could condition its approval of a state planning process on the inclusion within the process of a mechanism for determining how the maximum daily load determined pursuant to Section 303(d) will be allocated among various possible developments. The priority rankings and daily pollutant loads would have the effect of establishing a ceiling on the amount of new development which could be permitted in the particular basin without violating water quality standards. Failure of a state to provide this sort of mechanism would leave implementation of water quality standards more and more to chance. Land use controls with respect to these areas would be helpful and could lead to more rational development of an area with better protection of water quality.

A state could permit new development to use up whatever pollutant loading is available on a first-come, first-served basis by implementing a program of assigning "effluent rights" to land in the particular area. Building or other permits would not be issued unless the builder had sufficient effluent rights associated with his land or was able to obtain sufficient rights from other persons who would sell or otherwise transfer their rights. Such a process could effectively limit the amount of effluent discharges but it would not necessarily result in rational planning or coordination of development.

b. Water Quality Segments. Programs such as those suggested above would deal with only a part of the water quality problem as they would be limited to areas where effluent limitations are not stringent enough to implement water quality standards. EPA has already begun to classify segments of waters into a "water quality" class or an "effluent limitation" class[49] depending on whether the waters meet or are likely after application of effluent limitations to meet relevant water quality standards. This classification concept could be refined even further to provide a number of classifications or segments to which varying degrees of effluent limitations and/or land use controls might be required to achieve and maintain designated water quality standards. For example, in segments having the severest water quality problems, plans might be required which would provide a review of all development whether

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[49] See supra, pp. 91-92.

resulting in a discharge of pollutants directly into waterways or into a sewage treatment system. On the other hand, in segments where there is little or no problem meeting applicable water quality standards, plans might provide for review only of developments requiring NPDES permits.

c. Overall Growth Plans. The approaches suggested above would involve a close review of development primarily in areas where water quality problems are most severe. However, the battle against water pollution may best be handled by looking not only at problem areas, but also closely examining all areas. Although water quality at any particular point may be no problem today, gradual development can have a snowball effect resulting in serious problems before effective action is taken to avoid problems. The Section 303 planning process is not designed solely to deal with areas where water quality standards are not being met. It is also designed to assure that areas where water quality is not a problem remain that way.

The very purpose of the Act as stated in Section 101(a)(1) is to eliminate discharges of pollutants into navigable waterways by 1985. This objective cannot be achieved unless EPA has authority to require states to comprehensively plan not only for the location of alternative land disposal sites. Assuring proper siting of such facilities will necessitate control over development in general. Thus, EPA could require states, as a part of the continuing planning process, to develop and begin implementation of programs analyzing growth patterns and expectations and to develop policies which will guide growth and development in such a manner that water quality can be maintained while sewage disposal problems are adequately dealt with. Such a program might entail the development of a growth plan which provides incentives to industry to locate plants in areas where sewage disposal can be handled without endangering water quality. By dispersing industry, there is a reasonable likelihood the population will also be dispersed to some degree possibly relieving the enormous pressures now being placed on disposal systems in major metropolitan areas.

d. Land Use Proximity Regulations. Pursuant to Section 304, EPA is to develop and publish information and guidelines with respect to the degree of effluent reduction attainable through application of treatment techniques, process innovations, operating methods "and other alternatives" for various categories of point sources. One factor which might be considered is the extent to which proximity of one source to another affects the degree of effluent reduction. For example, if two sources near each other discharge pollutants which when mixed cause a reaction resulting in more harm to water quality than the two individual pollutants would cause, one aspect of regulations developed under Section 304 might deal with location of sources with respect to each other. A state in developing its planning process could then be required to consider such Section 304 regulations.

Location of point sources in relation to particular uses would also be an important element in development of effluent limitations under Section 301 and the applicable guidelines under Section 304. For example, even if construction of a food processing plant using the best available technology for control of effluents would be consistent with water quality standards and effluent limitations, it still may not be advisable to locate such a plant adjacent to a bathing beach or a domestic drinking water intake. Land use controls would be able to deal with these problems resulting from proximity of land uses.

e. Nonpoint Source Controls. EPA is also to develop and publish information and guidelines with respect to criteria for identifying, evaluating and controlling nonpoint sources of pollution. Such sources include agricultural and forestry activities, mining and construction activities, disposal of pollutants in wells or other subsurface excavations, saltwater intrusion resulting from reduction in freshwater flow from any cause including extraction of groundwater, and changes in the movement or circulation of any navigable waters or groundwaters.[50] Although Section 304(e) does not contain the specific provision found in Section 208 that measures to control nonpoint source pollution might include land use requirements, the language of Section 304(e) is broad enough to encompass land use controls as one nonpoint source control. EPA is to develop information including:

> (1) guidelines for identifying and evaluating the nature and extent of non-point sources of pollutants, and
> (2) processes, procedures, and methods to control pollution resulting from [enumerated nonpoint sources.][51]

No basis is found in the Act or the legislative history for assuming the failure to specifically refer to land use controls in Section 304(e) is intended to mean methods of control developed under the section are to be any less extensive or effective than methods developed under Section 208. The legislative history under Section 208 indicates that in some instances the best procedure for controlling nonpoint source pollution may be total elimination of the practice in particular areas although control of methods of conducting the practice may be sufficient.[52] The section of the Senate Report relating to Section 304 also indicates the importance of land management techniques in controlling nonpoint source pollution:

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[50] Water Pollution Control Act at §304(e).

[51] *Ibid.*

> Sediment, often associated with agricultural activities, is by volume our major pollutant, not only from the degrading effect of the sediment, but because it also transports other pollutants. Fertilizer and pesticide runoff are also major agricultural non-point sources. Poor forestry practices, including indiscriminate clearcutting, may also generate substantial soil erosion problems. The full utilization of agricultural conservation techniques will be an important part of control of non-point sources called for under section [208].
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> Another phenomena associated with construction is, of course, the effect of completed projects upon the hydrologic cycle. One of the common problems associated with pollution control is the dramatic increase in storm runoff when the earth's surface is made impermeable. Thus highways, buildings, and parking lots all contribute substantially to the accelerated run-off of rain water into natural water systems. The greater volumes and greater velocity produced cause high rates or erosion and siltation In addition, highway runoffs often include oil, rubber particles, lead, asbestos and other elements or additives deposited on highways as a result of vehicular traffic. Recent studies have shown that this source of pollutants is growing in its magnitude and deserves prompt attention by the Administrator.[52a]

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[52] *S. Rep. No.* 92-414, *supra* note 5 at 39.

[52a] *Id.* at 52-53.

EPA has taken the position that the collection of runoff from nonpoint sources as in a storm sewer does not require a permit under the NPDES system. Rather, the FWPCA is directed at control of discharges of sewage, garbage and other refuse.[53] The issue is apparently in litigation at the present time and if the court rules against EPA's position, a permit program for control of nonpoint source pollution where the runoff is collected at a particular point would be needed.

Even if EPA's position is upheld, guidelines for control of nonpoint source pollution are to be developed under Section 304. Although these guidelines are not specifically referred to in the definition of a continuing planning process in Section 303(e), states are required to provide "adequate implementation, including schedules of compliance, for revised or new water quality standards."[54] If states are to attain applicable water quality standards, they will most likely have to find some way to handle nonpoint source pollution whether through a discharge permit system or through a system requiring permits for the undertaking of any development or activity, likely to result in nonpoint source pollution. Such permits could be subject to conditions designed to reduce the impact of the development or activity as a nonpoint source.

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[53] Address of R. V. Zener, Acting Deputing General Counsel, Water Quality Division, EPA, October 15, 1973, Washington, D.C.

[54] Water Pollution Control Act at §303(e)(3)(F).

With nonpoint source pollution as serious a threat as the legislative history indicates, it would seem incongruous if EPA could develop guidelines for controlling nonpoint source pollution under Section 304 which could include land use requirements but not be able to require states in their planning processes to implement appropriate measures to control nonpoint sources. This is particularly so when in light of the fact that if a Section 208 plan is in existence, land use elements in such a plan must be made part of the Section 303 plan.[55]

## D. Clean Lakes

Section 314 of the Act directs each state to prepare and submit to EPA for approval a classification of lakes in the state by eutrophic condition, "procedures, processes, and methods (including land use requirements), to control sources of pollution of such lakes," and procedures for cooperating with other federal agencies to restore water quality in such lakes.[56] Where states have submitted approved procedures for controlling pollution, EPA is authorized to grant funds to assist in carrying out such procedures.[57]

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[55] *Id*. at §303(e)(3)(B).

[56] *Id*. at §314(a).

Although this section is mandatory in its language, if states do not submit a program for lake pollution control, no sanction appears in the Act other than ineligibility for funds to carry on a control program. EPA is not authorized to implement any controls on its own initiative. However, as states are going to be subject to water quality standards and will essentially be forced to implement water quality control programs, many will undoubtedly seek to comply with Section 314.

The question then arises as to what sort of land use controls EPA might require before approving a state procedure under Section 314. A review of experience in a few states which have adopted water related land use programs may be instructive.

1. Washington Shoreline Management Act of 1971.[58] The Washington Shoreline Management Act of 1971, which depends primarily on local governments for implementation, is designed to regulate land use along the shoreline of all

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[57] *Id*. at §314(b).

[58] Washington Rev. Stat. Ch. 90.58, Water Rights; Effective June 1, 1971.

but the smallest waters in the state. Any development in defined shoreline areas having a market value or costing more than $1,000 requires a permit before any construction activity takes place. Such development must be consistent with planning programs adopted by local governments or the state where it has adopted any particular program.

Rather than relying on a zoning ordinance to be adopted by all municipalities, the State of Washington develops a "master program" for each area covered which combines land use regulations, maps, performance standards, descriptive material and a statement of goals and standards. This program is then implemented by relevant local governments.

2. Wisconsin Shoreland Zoning Law.[59] Another shoreland protection program has been developed in Wisconsin under the Water Resources Act of 1966. Under the Act, waters and shorelands in Wisconsin are treated as special management units. Counties are authorized to enact zoning ordinances which meet minimum standards for shoreland protection developed by the State Department of Natural Resources, but if they fail to do so, the Department is authorized to impose such regulations. Standards and criteria developed

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[59] Wis. Stat. Ann. Ch. 59.971, 144.26 (Supp. 1970)

by the Department are designed specifically to avoid pollution hazards in such ways as requiring minimum lot sizes, regulating dredging, filling and grading, and regulating sewage disposal and water supply systems.

The Department has promulgated a Model Ordinance which relies in part on standard zoning provisions dealing with lot sizes, setbacks, cluster developments and other factors. Shorelands are also divided into three principal zoning districts:

(1) Conservancy - to protect swamps or marshes seldom suitable for building with some permitted uses such as hunting, fishing, riding, golf, forestry.

(2) Residential - Recreational - shorelands in which uses allowed in conservancy districts are allowed along with seasonal or year round homes and certain recreational uses.

(3) General Purpose - all other areas.[60]

Although Wisconsin can require that counties adopt a shorelands ordinance, enforcement and administration is left to the counties, the State having no enforcement authority.

3. Tahoe Regional Planning Compact.[61] Lake Tahoe is protected by a unique interstate compact under which

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[60] "Wisconsin's Shoreland Protection Ordinance," prepared by the Department of Natural Resources, Division of Resource Development, Madison, Wisconsin (December, 1967).

[61] P.L. 91-148, 83 Stat. 360, December 18, 1969.

six representatives from local governments in California and Nevada make up a governing body responsible for development of a plan for the long term development of the Lake Tahoe region. The impetus behind creation of the Tahoe Regional Planning Agency was the finding that the deep blue color for which the lake was famous was turning green. The Agency adopted a Land Use Plan in December, 1971 and later developed a Land Capabilities Map for the entire basin. The Agency combined the professional judgment of experts in several fields with computer-based techniques to analyze data encompassing 59 variables covering topography, geomorphology, geology, climate, soils, vegetation and hydrology. A number of other plans for various aspects of the basin, such as open space, recreation and conservation, sewer and water systems and housing have been developed and are in various stages of the adoption process.

The Agency is also authorized to adopt all necessary ordinances and regulations to effectuate the various plans. However, the plans and ordinances and regulations adopted pursuant thereto are enforced by the respective states, counties and cities in the region as well as by the Agency.

4. Alternatives for EPA Consideration. Any of these three programs could serve as a model for EPA to approve pursuant to Section 314 provided one agency is

responsible for assuring that water quality standards and effluent limitations are developed and enforced by the relevant local governments around lakes. Other variations are also possible which might centralize all authority in a single agency to deal with lake pollution. Such an agency might be required to develop a zoning map or master plan which encompasses such matters as lot size, setback requirements, permitted uses, use of septic tanks and various other factors to assure that development is appropriately planned and regulated to reduce pollution from point as well as nonpoint sources.

Rather than adopting a mapping program, a permit program could be developed requiring compliance with various performance standards relating to such matters as runoffs, soil permeability, beach erosion, dune protection, farming or lumbering procedures as well as other factors influencing pollution levels in lakes. While it may be convenient to encompass such a program within a state's Section 303 planning process, there would appear no legal inhibition to adopting a process whereby standards developed by a state agency are implemented by the various local governments surrounding the lake.

## E. National Pollutant Discharge Elimination System.

The National Pollutant Discharge Elimination System ("NPDES") replaces the system established under the

Rivers and Harbors Act of 1899 for the issuance of permits for discharges into navigable waterways. Under NPDES, EPA is to issue permits for discharges of pollutants unless a state has adopted a permit program approved by EPA covering navigable waters within its boundaries, in which case the state may administer the permit program.[62] Each state must transmit copies of all applications for permits to EPA (unless EPA waives this requirement for any particular categories of point sources)[63] and EPA can prevent issuance of a permit by objecting within 90 days that issuance would be inconsistent with the guidelines and requirements of the Act.[64] To date only California, Oregon, Indiana, Connecticut and Michigan have permit programs which have been approved by EPA.[65] Whether or not a state has a NPDES permit program, an applicant for a permit must provide a certification from the state that the discharge will comply with the standards of the Act.[66]

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[62] Water Pollution Control Act at §402.

[63] *Id*. at §402(f).

[64] *Id*. at §402(d).

[65] Conference with Stewart Tuller, Acting Chief, Policy Section, Permits Policy Branch, Municipal Permits and Operations Division, February 11, 1974.

[66] Water Pollution Control Act at §401(a).

No state permit program may be approved by EPA unless a continuing planning process to assure compliance with water quality standards pursuant to §303 is approved and no permit may be issued if the proposed source would be in conflict with any applicable areawide waste treatment plan under §208.

1. Public Treatment Plant Permits. The NPDES system applies to publicly owned waste treatment plants as well as to privately owned pollutant sources. However, it is specifically provided that whenever any condition of a permit for discharge from a publicly owned treatment plant is violated, EPA or a state with an approved permit program may proceed in court to prohibit the treatment plant from accepting any new connections of pollutant sources.[67] Such action could have drastic consequences for it could effectively halt further development in the area served by a publicly owned treatment plant unless alternative waste disposal methods are available. In light of the rather drastic remedy authorized by §402(h), the issue arises as to what sort of conditions EPA can require be attached to permits for publicly owned treatment plants.

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[67] *Id*. at §402(h).

If EPA is issuing permits in states with no approved Section 303 plan, it must issue permits which insure compliance with effluent limitations and standards of performance developed under Sections 301, 302, 306, 307 and 403 of the Act.[68] Since EPA has authority to prevent issuance of permits by States pursuant to Section 402(d)(2) if issuance would be inconsistent with the guidelines and requirements of the Act, it would seem clear EPA could condition issuance of a permit on compliance with guidelines developed under Section 304 and other requirements of the Act. The legislative history is not clear as to whether the use of the terms "guidelines and requirements" has any particular connotation. Water quality standards and effluent limitations promulgated under various provisions of the Act are clearly requirements of the Act but such things as guidelines for control of nonpoint source pollution are not so clearly "requirements." However, since EPA has authority to prevent issuance of permits which are outside "guidelines," presumably EPA could condition issuance of a permit on compliance with nonpoint source pollution control guidelines.

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[68] *Id*. at §402(b)(1)(A).

Furthermore, the provisions of Section 511 requiring environmental impact statements pursuant to the National Environmental Policy Act with respect to NPDES permits for new sources are evidence of Congressional concern for a comprehensive evaluation of the environmental impact of the issuance of a permit and the operation of a plant pursuant to the permit. The fact Congress required preparation of an impact statement would seem to indicate an intention that EPA exercise its authority under the Water Pollution Control Act and other environmental protection laws to assure that adverse consequences are avoided to the extent possible. Thus, conditions imposed in NPDES permits ought to be such as would be necessary to reduce the adverse environmental impact indicated in an impact statement.[69]

As noted earlier,[70] EPA has taken the position NPDES permits are not required for nonpoint sources. This position has some support in the fact that Section 402(a) authorizes issuance of a permit for the "discharge of any pollutant, or combination of pollutants." Section 502(12) defines the term "discharge of a pollutant" as

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[69] This consistency between NPDES permit conditions and environmental impact statements should also exist between grants and related impact statements. See, supra, pp. 71-73.

[70] See supra, p. 103.

> (A) any addition of any pollutant to navigable waters from any point source,
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> (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft. (Underlining added.)

While the argument that permits for particular nonpoint sources are not required may have some support, much runoff from nonpoint sources eventually collects in a culvert, sewer or some other collecting system from which it may enter navigable waters. At that time the nonpoint source has become a point source for which a permit would appear to be required. Implementation of nonpoint source guidelines could be achieved if EPA would refuse to issue a permit for the discharge from the collecting system if sufficient controls are not imposed by the responsible agency to assure that nonpoint source guidelines are applied by the various sources adding pollutants to the collection system.

Of probably greater concern, however, is the kind of conditions EPA can require in permits for municipal waste treatment plants. One of the principal contributors to the problem of water pollution in the United States is the municipal treatment plant which is overloaded and cannot adequately process all of the sewage delivered to the plant. As a result, much raw, untreated or partially treated sewage is discharged into navigable waters. Much of this problem is caused by the rapid, unchecked development of urban and suburban subdivisions and housing developments which in many instances are located and designed to maximize a developer's profit rather than to fit into a rational and orderly plan for community development which takes into account the ability of public bodies to provide essential services.

EPA could simply choose to impose conditions on permits respecting the amount of wastewater which could be treated by a plant so as to assure that effluent limitations can be adhered to and water quality protected. Exercise of authority in that fashion would leave it to local governments to determine what sources could be connected to a treatment plant with other development forced to rely on septic systems or alternative means of waste disposal. While such a process might relieve problems at the permitted sewage treatment plant, it might simply have the effect of transferring the pressure elsewhere. For example, soils in an area which is not provided access to the sewage treatment plant may not be very suitable for septic tanks or may be suitable only under limited circumstances (such as large lots). If a municipality does not adequately deal with the septic tank problem while its sewage treatment plant capacity is limited, water pollution problems may not in fact be alleviated by permit conditions applicable only to treatment plant operations.

Thus, although a sewer ban when certain levels of utilization of plant capacity are reached is one possible approach to conditioning permits for municipal systems, it alone may not be sufficient unless tied to some broader program for assuring that other development which occurs has adequate alternative means of sewage disposal available. One possible approach would be to impose conditions on a NPDES permit not only providing for a ban on new connections when plant capacity is reached, but also requiring the municipality to adopt a building permit program which limits permits to construction of facilities which can meet performance standards for disposal of sewage. These standards could take into account alternatives such as septic systems, recycling possibilities, land disposal or other alternative disposal techniques.

Such a program would not require a municipality to adopt any particular land use plan or impose any arbitrary ceiling of growth and development except as growth and development may be limited by the capacity of existing sewage treatment plants and alternative treatment techniques to absorb any and all of the waste being generated. However, if a municipality were to issue building permits pursuant to such a program on a first-come, first-served basis, such a program could lead to unbalanced development as there would be no assurance jobs would be available for residents of new subdivisions which might take up whatever remaining capacity exists for sewage disposal, or industry may be permitted without adequate provision for housing for employees. In addition, if a building permit program would permit construction of a development, such as a chemical plant, which had the capability of transporting its wastes out of the particular jurisdiction, such a program may simply transfer the burden of dealing with sewage disposal from one area to another unless further controls for disposal of waste materials are imposed.

Little can be done to avoid the need for new and additional housing and associated services required by present and future populations attracted by new jobs in an area. Thus, any system for controlling growth must concentrate on those facilities which create new jobs. The Water Pollution Control Act contemplates a broad attack on the problems of water pollution as illustrated by the requirements of Section 303, Section 208 and the various provisions dealing with effluent limitations. As there are so many aspects of residential, commercial, industrial, and other kinds of development and activities which affect water quality in one way or another, one of the most effective ways EPA could deal with the overall problems is to condition the issuance of NPDES permits for municipal treatment plants on a requirement that the municipality not only control issuance of permits for new development as suggested above, but that the municipality also undertake a program to study patterns of growth and development within their jurisdiction for the purpose of establishing policies and guidelines to determine what optimum levels and kinds of growth and development can and ought to be allowed.

Such a requirement would in effect require many municipalities to undertake planning and control programs covering all phases of land development. Whether EPA would be upheld in such requirements is not a question to which there is a clear answer. Given the broad authority to establish and implement water quality standards and effluent limitations, and given the intimate relationship between land use and development of all types and its impact on water quality, a good argument can be made that reasonable conditions imposed by EPA could be upheld even though they would require a degree and scope of planning and land use controls not previously exercised by many municipalities.

2. Private Source Permits. EPA also has authority to issue NPDES permits for private sources of pollution. The conditioning authority in such cases is of necessity much more narrow than in the case of municipal treatment plants since a private source has little or no power to compel any party other than itself to take any

action with respect to the use of its land. Some conditions would be feasible with respect to the owner's use of its own property. Thus, where effluent standards indicate particular point sources ought to be separated by a certain minimum distance to avoid harmful reactions in the intermingling of pollutants, minimum lot sizes may be required to insure adequate separation of sources. Or, if a source is to be constructed near a bathing beach or a water intake, lot size requirements, holding tanks, controlled rates of discharge or other measures might be required to assure sufficient dilution of pollutants before they reach sensitive areas. An outright ban at particular locations might even be required where violations would result because water quality standards or effluent limitations could not be met.

Consistency with local land use planning and control requirements could also be made a prerequisite. The permit provisions of the Act do not give EPA authority to require placement of a source at any location state or local law would not authorize or permit. Since a permit does not give a private party the right to proceed with a development contrary to the provisions of state or local land use regulations, there would seem little problem in requiring a private applicant to show it is proceeding consistently with applicable state and local land use regulations.

## F. Ocean Dumping

The Marine Protection, Research, and Sanctuaries Act of 1972[71] requires a permit from EPA before any waste materials from the United States are dumped into any ocean waters. EPA is to establish criteria for the review and evaluation of permit applications considering the need for the proposed dumping, the effect on human health and welfare, the effect on the ocean environment and whether alternative disposal techniques including land dumping or recycling might be more appropriate.[72] If EPA in establishing criteria for permits determines that land-based alternatives are more appropriate in particular situations, permits may be rejected, requiring that waste previously disposed of in the ocean be disposed of at landfill sites or through recycling or some other disposal process.

The Marine Protection Act, unlike the Water Pollution Control Act, does not provide for creation of any state agency mechanism for issuance and control of ocean dumping permits. EPA is to develop the criteria and issue the permits. However, in light of its authority to establish criteria regarding land-based alternatives to ocean dumping, EPA might require municipalities applying for permits to demonstrate they have considered land-based alternatives or have planning programs to provide land-based alternatives to ocean dumping. The feasibility of land-based alternatives would also have to be measured against the ability of the permittee to comply with the various other environmental control standards in effecting land-based alternatives to ocean dumping.

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[71] Pub. L. No. 92-532, 86 Stat. 1052 (October 23, 1972) 33 U.S.C.A. §1401 *et seq*.

[72] *Id*. at §102(a).

# CHAPTER V

## EPA AUTHORITY TO IMPOSE LAND USE CONTROL REQUIREMENTS UNDER OTHER LEGISLATION

### A. The Noise Control Act of 1972[1]

Under the Noise Control Act of 1972, EPA is to develop criteria concerning the effects of noise on the public health or welfare and to report on available noise control techniques.[2] Industries emitting high noise levels are to be identified leading to guidelines for location of such industries. Guidelines might include such techniques as establishment of buffer zones or minimum acreage requirements to reduce the effects of noise on surrounding development.

The authority of EPA under Section 5 of the Noise Control Act is merely advisory for no power is given to EPA to require states to adopt and enforce the published criteria or to preempt state noise regulations. However, states could adopt and enforce the criteria developed by EPA or other similar criteria, as Illinois has done[3] and

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[1] Pub. L. No. 92-574, 86 Stat. 1234, 42 U.S.C.A. §§4901 *et seq*. (hereinafter sometimes referred to as the "Noise Control Act.")

[2] Noise Control Act §5.

[3] Order of Illinois Pollution Control Board dated July 26, 1973, reported in 4 BNA Environmental Reporter, Current Developments, p. 596, Aug. 10, 1973.

New York has proposed.[4] Such a conclusion is bolstered by passages in both the Senate Public Works and House Interstate and Foreign Commerce Committee Report which dealt with the Noise Act such as the following:

> . . . [S]tates and local governments have the primary responsibility under the bill for setting and enforcing limits on environmental noise which in their view are necessary to protect the public health and welfare. This essentially local responsibility is not assumed or interfered with by this bill, although Federal leadership and technical assistance are provided in the criteria required by §407(a) which will set forth levels of environmental noise protective of public health and welfare.
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> * * *
>
> This discussion of preemption does not deal with regulation of noise from interstate carriers such as railroads and motor carriers. Such sources, which are regulated under Parts B and C of Title V, are subject to state or local regulations only where the Administrator determines it to be necessitated by special local conditions or not in conflict with regulations under Parts B or C.[5]

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[4] Proposed regulations were the subject of hearings on October 9, 11 and 18 in New York. The regulations would establish limits on sound emitted by various classifications of land use. 4 BNA Environmental Reporter, Current Developments, p. 841, Sept. 21, 1973.

[5] S. Rep. No. 92-1160, 92nd Cong., 2d Sess. 7 (1972). See also H. R. Rep. No. 92-842, 92 Cong. 2d Sess. 9 (1972).

With respect to noise generated by aircraft at and around airports, EPA's authority is somewhat more extensive. Proposed regulations for control and abatement of aircraft and airport noise are to be submitted by EPA to the Federal Aviation Authority.[6] Public notice has been given that such proposed regulations are being considered by EPA and comments have been invited.[7] The FAA has the power to approve, amend or reject such proposed regulations. Although the legislative history indicates that versions of the Noise Act prior to the version approved by the Conference Committee and subsequently by Congress did not contemplate giving EPA authority to control noise around airports by controlling land use, the final version authorizes EPA to propose regulations "as EPA determines is necessary to protect the public health and welfare."[8] No specific reference is made to land use regulations but the legislative history indicates EPA's regulations can encompass more than technological noise reduction requirements. Senator Tunney of California in describing the Act as it passed Congress said in Senate debate:

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[6] Noise Control Act at §7, amending Federal Aviation Act §611, 49 U.S.C. 1431.

[7] 39 Fed. Reg. 6142, Feb. 19, 1974.

[8] Noise Control Act, §7(b).

Under the amendment as proposed by the House, which we are now asked to approve, the Environmental Protection Agency would retain the authority to initiate a regulatory process to protect public health and welfare from aircraft noise. The EPA would be required to conclude within 9 months a study on aircraft noise problems, including the implications and means of achieving levels of cumulative noise around airports and the adequacy of existing noise emission standards and operational controls and a study of the impact of aircraft noise on public health and welfare. Subsequent to that study the Administrator would be required to take the lead on the control of aircraft noise, submitting regulations to protect public health and welfare from aircraft noise and sonic boom. Such regulations would be required to include proposed means of reducing noise in airport environments through the application of emission controls on aircraft, the regulation of flight patterns and aircraft and airport operations, and modifications in the number, frequency, or scheduling of flights.

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Again, I stress that those regulations would include, but would not be limited to, the imposition of curfews on noisy airports, the imposition of flight path alterations in areas where noise was a problem, the imposition of noise emission standards on new and existing aircraft -- with the expectation of a retrofit schedule to abate noise emissions from existing aircraft -- the imposition of controls to increase the load factor on commercial flights, or other reductions in the joint use of airports, and such other procedures as may be determined useful and necessary to protect public health and welfare. 9/

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9/ 118 Cong. Rec. S18644, Oct. 18, 1972.

As "public health and welfare" appears to be the standard governing regulations EPA is to propose, to what extent can land use restrictions be utilized to protect public health and welfare? It is clear airports and aircraft are going to exist and are going to be noise problems for some time to come as the technology for reducing aircraft noise emissions has not yet produced a truly quiet jet aircraft engine. Also there is little doubt excessive noise can be damaging to health and welfare. Until such time as aircraft engines can be made quiet enough to avoid serious health and welfare problems, the most likely way to reduce the impact of noise on public health and welfare is to remove airports and aircraft from significant concentrations of the public. One way this can be done is by imposing minimum acreage requirements for airports or requiring location in remote rural areas.

Minimum acreage requirements may have very limited usefulness for noise problems arise not only from movement of aircraft within an airport itself but also from aircraft approaching or leaving airports along particular flight paths. It would not be feasible to impose minimum acreage standards sufficient to require an airport authority to include adequate land along runway approach paths so development could not occur until planes were high enough that noise would no longer be a problem. Thus, some form of airport zoning would be the most viable way of dealing with the problem. Restrictions on the use of land surrounding airports would be designed to permit those kinds of development which would be least affected by the noise levels expected at particular distances from the airport. Developments with large numbers of people associated would be barred near airports while heavy industrial plants or other developments which may have fewer people associated with them or which may be in a better position to utilize noise protective measures (such as better noise insulation) could be permitted. Zoning restrictions might also be coupled with building code regulations requiring utilization of noise protection procedures and materials.

EPA is also responsible under Section 17 and 18 of the Noise Act for developing, after consultation with the Department of Transportation, noise emission standards for railroad equipment and facilities and interstate motor carriers. States, however, are permitted by both sections to establish standards or controls on levels of environmental noise, and to control, license or regulate the use of any product if EPA after consultation with DOT determines such standard or control is necessitated by special local conditions and is not in conflict with regulations under Sections 17 or 18.

There is nothing in the legislative history to indicate these provisions were intended to grant EPA authority to impose any form of land use restrictions on railroad equipment and facilities or interstate motor carriers. It is also to be noted that both sections authorize EPA to develop regulations regarding noise "emissions" rather than noise "levels," and an examination of paragraph (a)(1) of both sections indicates these regulations are primarily concerned with technology. While EPA's authority under Sections 17 and 18 would not appear to provide authority to adopt regulations imposing land use restrictions on railroads or motor carriers, EPA's authority under Section 5 to promulgate guidelines with respect to levels of environmental noise would permit EPA to try to influence such matters as the routing of highways, railroads or mass transit facilities in such a way as to minimize the effect of noise from such sources.

B. Solid Waste Disposal Act.

Recognizing that control of dissemination of pollutants into the air or water was only part of the job of protecting the environment, Congress enacted the Solid Waste Disposal Act in 1965[10/] which was amended

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[10/] Pub. L. No. 89-272, 79 Stat. 997, Oct. 20, 1965.

by the Resource Recovery Act of 1970.[11] Under this Act, EPA is authorized to make planning grants to state and local agencies enabling them to make surveys of solid waste disposal practices and problems, develop solid waste disposal plans and make studies of the effect of solid waste disposal practices on adjoining areas.[12] Applicants for such grants must give assurance full consideration will be given to all aspects of planning essential to areawide implementation of effective solid waste disposal systems. Such factors as population growth, urban and metropolitan development, land use planning, air and water pollution control and the feasibility of regional disposal and recycling systems must be considered.

A grant can be made only if EPA finds satisfactory assurance that solid waste disposal planning will be coordinated with and will not duplicate other related state or local planning activities. EPA has authority to attach conditions to any grants made, but no penalty provisions for noncompliance with conditions are provided in the Act. Thus, there may be some question as to whether Congress intended the conditioning authority to relate only to requirements which are met at the time a grant is made or to continuing conditions which remain effective throughout the life of the funded project.

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[11] Pub. L. No. 91-512, 84 Stat. 1227, October 26, 1970, 42 U.S.C.A. §§3251 et seq. (The Solid Waste Disposal Act of 1965 as amended is hereinafter sometimes referred to as the "Solid Waste Act.")

[12] Solid Waste Act §207.

The EPA can make grants to state and local agencies for the construction of solid waste disposal facilities or demonstration resource recovery systems.[13] Demonstration project grants must be consistent with any areawide solid waste disposal plans complying with EPA guidelines. To obtain grants for the construction of new solid waste disposal facilities, a state or local agency must have a solid waste disposal plan consistent with the §209 guidelines. The solid waste disposal plan must be consistent with, and included in, a comprehensive plan satisfactory to EPA for the area involved, which may allow EPA to attach conditions concerning the content of comprehensive land use plans before a construction grant will be given. The importance of comprehensive planning as a condition to receipt of a grant under Section 208 was emphasized in the House Committee report accompanying the Resource Recovery Act of 1970 in which it is stated:

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[13] Id. at §208.

> In determining desirability of projects and of approving Federal financial aid in connection therewith, consideration shall be given by the Secretary to the public benefit to be derived by the construction and the propriety of Federal aid in such construction, the relation of the ultimate cost of the project to the public interest and to the public necessity for the project and the use by the applicant of comprehensive regional or metropolitan area planning.[14]

In addition to its authority to make grants, EPA is to develop guidelines for solid waste recovery, collection and disposal systems. The guidelines are to be consistent with public health and welfare, applicable air and water quality standards and are to be "adaptable to appropriate land use plans."[15] While these guidelines are not enforceable regulatory standards as in the case of the air quality standards under the Clean Air Act, federal agencies having jurisdiction over solid waste disposal activities are to comply with the guidelines.[16] Furthermore, states and local governments may decide to adopt the guidelines as the applicable state or local law and require all persons to dispose of their solid waste in a certain manner or in certain places.

The legislative history confirms that the Section 209 guidelines are merely advisory and not regulatory (except to the extent Section 208 requires compliance with Section 209 guidelines to obtain federal grants). Senator Muskie in the Senate debate on the 1970 Act stated with reference to Section 209, "These guidelines are advisory except when such state or locality applies for a demonstration grant under §208."[17] Along similar lines, Congressman Jarman stated on the floor of the House of Representatives:

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[14] *H. R. Rep. No.* 91-115, 91st Cong., 2d Sess. (1970), 3 *U.S. Code Cong.* and Admin. News, 91st Cong., 2d Sess. 4558 (1970).

[15] Solid Waste Act at §209(a).

[16] Id. at §211.

> Unlike the Clean Air Act, this is not regulatory legislation. It is legislation pure and simple to generate new technologies at the earliest possible date for disposing of solid waste and for recycling usable waste and to build pilot plants where these new technologies can be demonstrated.[18]

As Section 209 guidelines are not mandatory (except to the extent federal agencies are to comply with such guidelines), the only handle EPA has to assure any compliance by state and local governments is through the Section 208 grant conditioning authority. It is clear Section 208 contemplates a degree of comprehensive planning with respect to solid waste recovery and disposal systems by an agency receiving a grant, but as a practical matter it would appear EPA might be limited in the kind of detail it can effectively require in "appropriate land use plans" referred to in Section 209. If EPA seeks to impose guidelines which require substantial planning efforts directed not only at solid waste recovery and disposal systems but also at sources of solid wastes, state and local agencies may refrain from seeking grants to avoid what may be viewed as onerous guidelines.

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[17] 116 Cong. Rec.S26704, July 31, 1970.

[18] 116 Cong. Rec.H20881, June 23, 1970.

However, where EPA can tailor Section 209 guidelines with land use requirements which may be imposed under the Clean Air Act or Water Pollution Control Act, there is a better chance that local governments, which would be required to comply with Air and Water Act requirements, could be persuaded to adopt Solid Waste Act guidelines. Thus, while Section 209 would appear to authorize EPA to develop guidelines which consider or seek to implement growth or growth pattern controls as a means of dealing with solid waste problems, developing such guidelines as a complement to similar regulations under the Air or Water Acts rather than as an entirely separate planning system would seem advisable.

### C. Compliance with Environmental Controls by Federal Agencies

Each of the acts previously discussed in this and the preceeding chapters contains a provision requiring that federal agencies and facilities be in compliance with all applicable environmental standards and controls developed under the acts, whther by EPA or state or local governments.[19] Under appropriate circumstances, where the national interest requires, the President may exempt federal sources.

Pursuant to these (or other) provisions, President Nixon issued Executive Order 11752 on December 17, 1973[20] in which the following policy was set forth:

> It is the purpose of this order to assure that the Federal Government, in the design, construction, management, operation, and maintenance of its facilities shall provide leadership in the nationwide effort to protect and enhance the quality of our air, water, and land resources through compliance with applicable standards for the preservation, control, and abatement of environmental pollution in full cooperation with State and local governments. Compliance by Federal facilities with Federal, State, interstate, and local substantive standards and substantive limitations, to the same extent that any person is subject to such standards and limitations, will accomplish the objective of providing Federal leadership and cooperation in the

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[19] Clean Air Act, §118; Water Pollution Control Act, §313; Marine Protection, Research, and Sanctuaries Act of 1972, §1411(c); Noise Control Act of 1972, §4(b); Solid Waste Disposal Act, §211.

[20] 38 Fed. Reg. 34793, December 17, 1972.

> prevention of environmental pollution. In light of the principle of Federal supremacy embodied in the Constitution, this order is not intended, nor should it be interpreted, to require Federal facilities to comply with State or local administrative procedures with respect to pollution abatement control.

Section 5 of the Executive Order authorizes exemptions from applicable standards under the various acts if the head of the federal agency involved consults with EPA and both agree the particular activity should be exempt because of national security or other extraordinary cases where national interest is paramount. If EPA does not agree that an activity should be exempted, the federal agency can seek approval for the exemption from the Office of Management and Budget.

The statutory sections cited above together with the Executive Order make it clear federal agencies in any of their activities are to comply with environmental standards and control programs developed pursuant to those acts even though developed by state and local agencies just as if the federal agency were a private person. Thus, the status as a federal agency does not enable an agency to avoid compliance with state and local environmental control programs developed under the federal laws. This would also apply to the land use portions of any such control programs.

# CHAPTER VI

## RELATIONSHIP BETWEEN EPA AND STATE, REGIONAL AND LOCAL LAND USE AND ENVIRONMENTAL PROTECTION AGENCIES

While it is clear a variety of possible techniques are available to EPA to implement various kinds of land use control programs in striving to achieve and maintain appropriate air, water, noise and solid waste disposal standards, the issue arises as to who decides how to impose which controls at what time. In some situations, as under the Noise and Solid Waste Acts, the final choice is going to be left largely to state and local governments to promulgate their own implementation plans for EPA has little effective control to require state and local governments to adopt particular kinds of programs unless grants are being sought as under Section 208 of the Solid Waste Act. However, where EPA has developed standards and guidelines which incorporate land use matters in control of noise or solid waste problems, EPA can be helpful and influential in assisting state and local governments to model their programs on the EPA guidelines.

With respect to air and water quality standards, EPA has substantially more authority and can effect its own requirements in states which do not comply with the provisions of the Air and Water Acts. Furthermore, in some situations under the Noise and Solid Waste Acts, as in the case of airport noise regulations or in awarding grants for solid waste disposal projects, EPA is in a position to require implementation of land use control processes. To what extent should EPA exercise that authority in deciding when and how to impose which controls?

Perhaps the simplest method would be for EPA to develop the relevant environmental quality standards with the various emission or effluent limitations or guidelines and performance standards. With these standards and guidelines developed and published, EPA could then approve state implementation plans which assure that no new sources of pollution will be permitted if the standards developed by EPA are exceeded. EPA could simply leave questions of which sources will be built when and where to the local agencies. Thus, a state which adopts what is essentially a first-come, first-served system issuing permits for the construction of facilities until such time as allowable pollution increments are met could be approved by EPA as well as programs from states which seek to provide some degree of planning and rationality to decisions as to which and under what conditions new sources will be permitted.

However, it is ultimately EPA which is responsible under the various pollution control acts for developing and assuring implementation of appropriate environmental quality and performance standards. Thus, it would also be appropriate for EPA to undertake a program requiring local agencies to take a more comprehensive look at growth and development within their jurisdiction and coordinate environmental quality enforcement with land use planning. As a practical matter it would be impossible for EPA to get involved in the substance of all local land use planning processes, but it would not be out of place to require comprehensive coordination of land use and environmental quality control processes.

Rather than relying on programs either leaving land use aspects of environmental control programs completely to states or developing a program in which EPA requires a close coordination of all aspects of land use affecting environmental quality control, EPA could implement a program by which land use controls may be selectively implemented by local pollution control agencies on a case-by-case basis. Thus, for example, a determination could be made that land use elements are more important in dealing with hazardous emissions or toxic effluents or other particular kinds of pollution sources, but that with respect to other sources, states could be left to exercise such controls as they deemed fit provided environmental quality and performance standards are complied with.

To date, EPA has largely left questions of implementation of land use controls to state and local pollution control agencies. Although there is recognition that the various pollution control acts and EPA controls promulgated thus far will have substantial impact on land use and that land use controls could substantially aid in implementation of environmental quality standards, there has been concern that EPA not preempt the functions of state and local land use planning and control agencies. There is merit in this concern not only because of the political ramifications in a federal agency appearing to usurp more and more of state and local prerogatives, but also in the fact that EPA clearly does not have the manpower, resources and expertise to undertake a massive land use planning program applicable to the local level throughout the United States.

Many states and local governments have undertaken extensive programs of land use planning and land use control. While there is by no means great consistency throughout the United States in the quality or extent of such programs, and indeed there are many areas where no such planning or control exists at all, if EPA makes the basic policy decision that there is need for greater application of land use controls in achieving and maintaining compliance with environmental quality standards, it would be advisable for EPA to take some steps to assure that its regulatory requirements provide some mechanism for achieving consistency between pollution control requirements and state and local land use procedures.

EPA could implement land use controls by requiring local pollution control agencies in the implementation of environmental quality standards and performance standards to have adequate authority to implement appropriate land use controls. Indeed, some of the regulations already promulgated by EPA require that plans submitted by state agencies include control strategies for insuring that projected growth and development will be compatible with achievement and maintenance of environmental quality standards.[1/] EPA might seek to require pollution control agencies to have authority to exercise this power or it might require where the agency does not itself have the power that the state provide a coordination mechanism whereby agencies having the power are required to coordinate decision making with the pollution control agency. EPA has begun to implement such a policy in its regulations dealing with the content of water basin plans where each

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[1/] See *e.g.*, 40 C.F.R. §51.12.

basin plan is required to be coordinated with other applicable state and local land use and natural resources plans.[2] Consideration might be given to making more extensive use of this sort of provision to encompass other existing planning mechanisms which may affect land use or natural resources without having any direct control. Such might also include industrial development programs.

EPA should also determine what authority the state and local pollution control agencies have to resolve conflicts between environmental control plans and the various other state and local plans, and whether state law permits any other agency to override a decision by the pollution control agency. A state planning process would have to be deemed unsatisfactory if any other agency could effectively override decisions and regulations promulgated under EPA approved plans and regulations.

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[2] 40 C.F.R. §130.22, 38 Fed. Reg. 8034, March 27, 1973.

# CHAPTER VII

## INTERRELATIONSHIPS AMONG EPA POLLUTION CONTROL PROGRAMS

While each of the separate pollution control programs is directed toward one aspect of a common goal (to attain and maintain a cleaner and more healthful environment), the various programs will not always operate in harmony when two or more bear on a particular development. Many of the EPA programs and the state and regional implementation procedures and plans are still in the formation stage (or even in court) and it is difficult to judge at this point what the real impact of these programs will be when they are fully fleshed out and put into force. In light of this uncertainty, this chapter deals with the possible interrelationships between pollution control programs using illustrative examples to suggest the kind of problems which may arise as the pollution control programs mature. One simple example will illustrate the point.

1. The metropolitan sanitary district of the City of Camelot has installed waste water treatment facilities to meet all requirements of its NPDES permit but in so doing accumulates enormous quantities of semiliquid sludge each day. It can dry portions of the sludge and sell the remaining solid as fertilizer but State odor regulations and energy shortages prevent converting all sludge into

> a solid form. Some of the liquid sludge can be sent to Desolation County and spread on abandoned strip-mined land in an effort to reclaim the land but the permeability characteristics of the soil and odor problems limit the amount of sludge which can be disposed of in this way. Use of sanitary landfills is also difficult because of the failure of many nearby municipalities to permit landfills at suitable sites so sludge has to be transported great distances for disposal.

Actually, the results of complying with one pollution control program (the Water Act) in the above example can assist in the implementation of other governmental programs since the use of sludge collected in the pollution control processes can aid in the reclamation of depleted and strip-mined land which is now useless. However, the problem of disposing of sludge is not quite so simple. Although EPA has not promulgated odor standards, there has been some work within the Agency on such standards or guidelines and various state and local governmental entities have in some instances adopted odor regulations which could bear on the ability to dispose of sludge by spreading it on land.

Large quantities of sludge which are not used as liquid fertilizer or dried and sold in solid form are disposed of in sanitary landfills. If the waste treatment system is located in an area which is subject to an areawide waste disposal plan similar to that called for by the Solid Waste Disposal Act, the options of Camelot's sanitary district may be narrowed with respect to possible sites for disposal as

Solid Waste Act guidelines will inhibit location of landfill sites where soil and geological conditions are not suitable. Indeed, where sufficient care is not taken to select suitable landfill sites, disposal of sludge from waste water treatment systems can cause water pollution as water containing dissolved pollutants drains from or through the deposited sludge into nearby surface waters or groundwater supplies. Similarly, the use of the liquid sludge as a fertilizer by spreading it over farmland or to reclaim depleted strip-mined or other land can cause additional Water Act problems if applied in such a way as to permit significant run-off of contaminated water into nearby surface waters or where soil conditions are such that leaching of pollutants into groundwater supplies may result.

The foregoing is but one simple example of how the implementation and enforcement of one pollution control program can be made more difficult because of the necessity to consider the applicability of other pollution control programs. The problems created by the interrelationship between the various applicable pollution programs in the example are not insoluable by any means. However, there are other situations where the interrelationships will not only make compliance with pollution control programs more difficult, but will bring conflicting influences to bear on a project. The following examples will illustrate interrelationships which can be very troublesome.

> 2. How can one dispose of solid waste in Gotham, a major metropolitan area on the coast of the United States. The Clean Air Act's state implementation plan makes incineration difficult if not impossible as Gotham's air quality does not comply with national ambient air quality standards. Disposal in a sanitary landfill -- presuming a nearby site can be found in the land-scarce metropolitan area -- must be undertaken in a fashion which guards against polluting groundwater (via leaching) or surface water (via runoff) supplies, contrary to the Water Pollution Control Act. Moreover, the state has adopted guidelines preventing such disposition under the Solid Waste Disposal Act. Although Gotham is on the Atlantic Ocean, it is limited in its ability to dump its garbage at sea by the Marine Protection, Research and Sanctuaries Act. Presuming the economic feasibility of removal and disposition to a site far from the metropolitan area (which, again, could not be an incineration site in conflict with significant deterioration standrds), the state's Solid Waste Act guidelines indicate a number of places where sanitary landfills would be appropriate, but the local zoning regulations in most counties and municipalities zone out landfills and even solid waste disposal plants -- after all, what community wants a "dump" in its backyard?

The problem of solid waste disposal can be a more difficult one than the disposal of sludge because there are fewer alternatives for disposal. Sludge can in many situations be turned into useful fertilizer either in a dry form (e.g., the program of the City of Milwaukee, Wisconsin to turn sludge into a fertilizer called Milorganite) or in its liquid form (e.g., the arrangement between the Metropolitan Sanitary District in Chicago, Illinois and Fulton County, Illinois for reclaiming depleted and strip-mined land). Thus, the need to incinerate or dump the waste sludge in landfill sites is reduced. The Solid Waste Act seeks to encourage recycling of solid waste materials and to some extent this is being done. However, some means of disposal must be found for the great bulk of solid waste matter and the choices are essentially limited to incineration or dumping in appropriate landfills.

Guidelines developed under the Solid Waste Disposal Act along with federal grants under the Act will certainly aid in the location and establishment of landfill sites or recycling programs which will not create problems under other pollution control programs such as the Water Pollution Control Act. However, whatever guidelines are developed, they will not substantially reduce the need for tracts of land suitable for disposal, and in a heavily populated region like New York City unused land let alone land suitable for sanitary landfills may not be easy to come by. Minimally, such a land squeeze may increase the pressure on wetlands and other environmentally fragile lands in the coastal zones. When the guidelines are superimposed on an already limited available land supply, the problems of solid waste disposal become even more serious.

Another problem is the fact that Solid Waste Act guidelines from EPA are only advisory except as they apply to federal agencies. Unless state and local governments voluntarily choose to adopt the guidelines as the applicable local law, there is no assurance EPA guidelines will ever have any effect. Furthermore, the guidelines as contemplated by the Solid Waste Act may only indicate where or under what conditions landfills will be permissible. This does not mean that a site suitable for use as a landfill will be utilized for that purpose if the local government does not choose for whatever reason to establish or permit a landfill. Thus, unless some level of government above local government has the authority and will take the initiative to assure that sufficient landfill sites are established wherever appropriate in spite of local governmental policies or objections, landfill sites may wind up being located further and further from major sources of solid waste. Of course, as states and municipalities come to recognize the need to dispose of solid waste is one which concerns all citizens regardless of where they live, Solid Waste Act guidelines may be adopted and implemented voluntarily.

> 3. The location of housing can create similar problems, as it does in the Capitol City. The national government is offering an ever-increasing number of jobs in the area which has led to a tremendous in-migration and a concommitant demand for housing, either new or rehabilited. The question is: where?

> The continuing planning process under the Water Pollution Control Act dictates location of waste water treatment plants where there is existing sewer (and water, incidentally) capacity. But in the Capitol City area there is very little of this excess capacity except in the fringe areas -- where there is little existing housing to rehabilitate. However, construction of new housing will increase the chance of degrading "clean" air because of the almost certain development of complex sources, like shopping centers, which will accompany fringe residential construction. Adequate mass transit is not readily available in fringe areas of Capitol City so increased use of motor vehicles is inevitable with the attendant problems of complying with air quality control strategies to assure attainment and maintenance of standards. Building or rehabilitating existing structures in older areas where bus or other mass transit systems are readily available will lessen pollution from mobile sources -- automobiles and service vehicles. Moreover, construction of a mass transit system under the National Mass Transit Act, favoring as it does the dense clustering of development around stops, also favors construction and rehabilitation of housing near the central city. However, that is where sewage treatment capacity is limited.

The interaction of the land use impacts of EPA programs on new housing is especially complex. Compliance with water quality standards and effluent limitations would normally be facilitated if development is clustered around and attached to a central sewage treatment facility. In many existing urban areas and nearby suburbs such clustering may exist but the capacity of sewage treatment plants may be fully utilized. Under the NPDES permit system, municipal sewage treatment plants must obtain permits in order to discharge effluent into nearby waters which will be conditioned on compliance with appropriate water quality standards and effluent limitations.[1]

Conditions attached to permits for many of the existing sewage treatment facilities in urban areas may effectively limit the amount of new sources which can be connected to those plants, thus directing growth and development into new areas in which it may become necessary to construct new treatment facilities which will also be subject to NPDES permits. As water quality in many of the rivers and streams in urban areas is already rather poor, this may effectively force the dispersal of treatment plants into outlying areas.

The standards of the Clean Air Act also create major implications for new housing. Anybody who has driven in a typical metropolitan area during the rush hour is well aware of the massive reliance on automobiles by Americans. The dispersal of residential housing into the urban fringes will undoubtedly result in an even greater reliance on the automobile because of the difficulty of supplying adequate bus or other mass transit facilities in such areas. Regulations developed under the Clean Air Act require each state to identify areas within the state which over the next ten year period have the potential for preventing the attainment or maintenance of a national standard. A control strategy must also be devised to prevent construction, modification or operation of a facility or development which may cause such violation of national standards. Where substantial complex sources can be expected to be developed, in such areas states may be required to adopt strategies which will prevent the development of such sources, thus reducing the desirability of the area for residential purposes.[2]

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[1] See EPA Memorandum dated January 15, 1974 to Regional Administrators, supra note 6, Ch. II, p. 5.

Consequently, while Water Act standards may encourage the dispersion of housing into urban fringe areas, Clean Air Act standards would tend to encourage the concentration of population in already developed areas of cities where mass transportation facilities would be available. In this way reliance on the automobile could be reduced as people would be generally closer to their jobs and could more conveniently use mass transit systems. It is this concentration of population, however, that will lead to the overloading of existing sewage treatment facilities.

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[2] Part of this problem could conceivably be alleviated by imposing conditions on the NPDES permit issued under the Water Act which might limit the type and density of development being served by new water treatment facilities thereby preventing a type and density of development which would cause problems with implementation of Clean Air Act standards. However, development of such conditions would require considerable planning expertise on the part of EPA.

> 4. The City of Centerville, a major metropolis in the center of the United States, has found its existing airports too busy or too small to meet air traffic needs. Even if sufficient land were available to accommodate a jet airport in Centerville, airport noise regulations would prohibit a location so close to a high population density. However, location of the airport at a site consistent with Noise Act standards would place the airport beyond existing mass transit facilities requiring reliance on automobiles for transportation to the airport. This would mean development of a substantial complex source in a rural area where the air is clean. Furthermore, existing sewage plant capacity is not sufficient to handle all the storm water run-off from runways and parking lots.

FAA has not yet adopted specific Noise Act standards applicable to airport construction or developments surrounding airports. However, it would seem clear that any such standards will discourage location of airports in or near residential areas or developments such as schools, hospitals, or other areas where large quantities of people are likely to be concentrated or working. This is likely to inhibit location of airports in central cities or nearby suburban areas while encouraging them in rural areas or on the outer fringes of urban areas. Airports because of the accompanying jet exhausts are substantial complex sources and the accumulation of automobile exhaust emissions which normally will be associated. Furthermore, airports tend to attract various types of commercial and industrial development to surrounding areas which would generate additional traffic.

The complex source regulations under the Clean Air Act would tend to encourage the location of airports on fringes of metropolitan areas near mass transportation facilities or in rural areas where air is relatively clean. Such locations are likely to be far from mass transportation facilities and would require increased reliance on automobiles which would also have to travel much farther from the population centers to get to the airport area. Location in the center of urban areas would likely be inhibited since air quality in most urban areas does not meet the national air ambient air quality standards so the construction of the new source of the magnitude of an airport would not be feasible. Thus, construction of an airport in urban fringe areas would be the most likely possibility under Clean Air Act standards as auto transportation might be held down somewhat and the introduction of the airport may not cause "significant deterioration."

Construction of airports in urban or urban fringe as well as in rural areas may be inhibited by Water Pollution Control Act standards if existing sewage treatment facilities are being operated at or close to capacity. Airports can be expected to generate substantial amounts of water runoff from runways and parking lots and this runoff can be expected to contain large quantities of jet and motor fuel residues in addition to other waste materials which will accummulate on large paved surfaces.[3]

> 5. The metropolis of Sparkletown has been rapidly growing and faces increasing needs for additional electric power. Existing air quality is of such poor quality that new fossil-fueled electric generators are not permitted in the city limits. The lack of sufficient water and land for cooling ponds limits the usefulness of nuclear generating plants because of inability to meet thermal pollution standards. Construction of coal-fired generating facilities at coal mines outside the city is inhibited because of the significant deterioration regulations applicable to the clean air in the rural area of the coal mine.

More electric generating plants are required to meet this country's ever growing energy needs, and the choice of potential sites will be affected by competing considerations of the Air and Water Acts. The significant deterioration standards under the Clean Air Act may make it difficult under existing technology to build fossil-fueled plants anywhere except in urban fringe areas and then only in very limited numbers. Indeed, the explanation accompanying the proposed significant deterioration regulations indicates that while a 1,000 megawatt capacity coal-fired power plant meeting the new source performance standards of EPA could possibly be built under the proposed regulations in an air quality control region, the plant would take up a large part of the available emission allowance.[4] In many urban areas, air quality does not meet the national ambient air quality standards so a new plant cannot be built unless it gives off no emissions. However, the precise location of an electric generating plant is somewhat flexible in that electric power can be moved from a plant over high voltage transmission lines to places where it is needed. Thus, plants can be spaced appropriately to comply with signficiant deterioration guidelines. Whether the significant deterioration regulations would permit sufficient numbers of appropriately spaced plants remains to be seen.

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[3] While EPA has taken the position that the Water Pollution Act was not designed to require EPA to deal with such storm water runoff, per se, (see fn.53 supra, Chapter IV, and accompanying text) a state would nevertheless be free to adopt a program for regulating nonpoint source pollution, which would have the same effect. Such a program might involve requiring a permit for substantial sources which might be conditioned in various ways to reduce the impact of runoff or require some kind of treatment. In any event, the Water Act does require EPA to develop guidelines for controlling pollution from nonpoint sources. Even if EPA's interpretation of the Act is sustained and NPDES permits are not required by EPA with recpect to airport runoff, the impact of airport on water quality in the area affected by the runoff will have to be considered by states in implementing water quality improvement programs and any nonpoint source guidelines developed may bear on decisions as to where to locate airports.

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[4] 38 Fed. Reg. 18990, July 16, 1973.

Water Act standards also apply to the construction and operation of power plants and NPDES permits will be required for all discharges. Water is required to cool generating equipment and particularly with respect to nuclear powered generating plants great quantities of water may be required. While nuclear generating plants do eliminate the stack emission problems present with the traditional fossil-fueled plants and could therefore be located in urban areas without violating Air Act standards, nuclear plants are great generators of thermal pollution. Water Act standards have generally been rather strict in the allowable degree of thermal pollution which would be permitted thus requiring nuclear plants to install expensive cooling towers or cooling lakes and ponds which would require large tracts of land. Cooling lakes and ponds in urban areas would be impractical because of the enormous quantities of water which would have to be cooled and the large tracts of land which would be required. Cooling towers are not a simple answer because some types of cooling towers will create great clouds of mist under certain atmospheric conditions. Thus, urban locations of nuclear generating plants may be inhibited.

## Summary

The foregoing are but a few examples of many situations where appropriate implementation of various pollution control acts will often bring conflicting considerations to bear on a single project. The matrix following this chapter is an effort to illustrate in a graphic form various types of development as they are affected by the major pollution abatement and control programs of EPA. The matrix is not intended to encompass every possible land use impact of all EPA responsibilities, but rather, to identify a wide range of categories of development and to illustrate the various major EPA programs which bear on the selected categories of development.[5/]

Although Congress has given some flexibility to EPA in establishing standards and in issuing appropriate permits, this flexibility is quite limited. The courts have shown a willingness to interpret the statutory language very strictly, and Congress has provided no mechanism within the acts for handling situations where two different acts impose requirements which may in some respects be mutually exclusive.

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[5/] In choosing categories of development for the matrix no effort was made to distinguish types of development solely because of their size. Thus, residential development shows up as only a single category even though the size and density of residential development can drastically affect the kind of environmental problems which will ensue Where size is a particularly significant factor in the relationship between the type of development and EPA responsibilities, notation will be made on the matrix or the accompanying notes.

Furthermore, the acts do not provide a mechanism for taking into consideration governmental laws and policies other than pollution control policies. For example, the policies of the Water Pollution Control Act which require strict limitations on effluents from sewage treatment plants may have a substantial impact on efforts to revitalize innercity areas through such techniques as urban renewal, model cities and urban mass transportation -- techniques which may be helpful in reducing air pollution problems by reducing reliance on automobiles, but which are likely to increase the pressures put on urban sewage treatment facilities by concentrating more people in a smaller area.

Programs such as the Rural Development Act of 1972[6] and the Appalachian Regional Development Act[7] seek to encourage development and improve the lot of people living in rural areas. However, development in rural areas usually means bringing industry and more people which will cause problems under both the Air and Water Acts. How can any substantial amount of industry be brought into a rural area which has clean air if the principle of "significant deterioration" will severely limit the amount of new emissions which would be permissible.

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[6] P.L. 92-419, 86 Stat. 657, August 30, 1972.

[7] P.L. 92-549, 85 Stat. 168, August 6, 1971.

The effort to administer the individual pollution control programs of EPA without some form of coordination among those programs and without some consideration of the impact of those programs on other state, federal and local policies could bring about irrational, chaotic and very expensive results.

A

MATRIX

IMPACT OF EPA PROGRA

| | CLEAN AIR ACT 1/ | | | NOISE CONTROL ACT 11/ | | | | |
|---|---|---|---|---|---|---|---|---|
| | Air Quality Standards (§104) 2/ | Emission Limitations (§§111-112) 3/ | Complex Source. 4/ | Noise Emissions (§5) 12/ | Airport Noise (§7) 14/ | Railroad and Truck Noise (§§17-18) 15/ | Treatment Works Grants (§§201-204) 5/ 21/ | Are (§20 |
| 1. Residential 16/ (11, 14) | | Incinerators 7/ | High Density Development | Mobile Home Standards | | | Condition re Growth Connections | Loc |
| 2. Shopping Centers (5) | | 7/ | X | 13/ | | | | |
| 3. Scattered Commercial, Service & Miscellaneous Light Industrial Development (23, 27, 35, 61-66) | Industrial Development | 7/ | (X) | X<br>13/ | | | | |
| 4. Office & Research Centers, Public Buildings, Schools & Universities (highrise or parks) (6391, 67, 69) | Emissions From Research Centers | 7/ | X | 13/ | | | X | |
| 5. Heavy Manufacturing (21, 22, 24-26, 28-34) | X | Emission Controls | X | X | | | | |
| 6. Agriculture - Crop Farming (81) | | | (Dust-Airborne Pesticide) | | | | | |
| 7. Agriculture - Feed Lot (819) | | | Odor Dust Problems | | | | | |
| 8. Recreational Centers - Theaters, Stadiums (72) | | | X | X | | | | |
| 9. Recreational Centers - Campgrounds, Golf Courses | | | (X) | | | | | |
| 10. Mineral Extraction - Surface (85) | | | 8/ | Blasting Excavation | | | | |
| 11. Mineral Extraction - Deep (85) | | | | | | | | |
| 12. Forestry (83) | | | | | | | | |
| 13. Airports (43) | | | X | | X | | | |
| 14. Highways (45) | | | X | X | | X | | |
| 15. Railroad Yards (41) | | | X | X | | X | | |
| 16. Generating Plants (481) | Stack Emissions Cooling Tower Mist | 10/ | | | | | | |
| 17. Dams and Other Impoundments of Watercourses (931, 932) | | | | | | | | X |
| 18. Waste Treatment Plants (484) | X | | | | | | Conditions X | X |

Numbers in ( ) under categories of land use are taken from Standard Land Use Coding Manual U.S. Government Printing Office in 1965.

X Likely Impact

( ) Possible impact depending on intensity of use or location

B

## MATRIX

### IMPACT OF EPA PROGRAMS ON LAND USE

| NOISE CONTROL ACT 11/ | | FEDERAL WATER POLLUTION CONTROL ACT 20 / | | | | | | | SOLID WASTE DISPOSAL ACT 16 / | | OCEAN DUMPING 28 / | NEPA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Airport Noise (§7) 14 / | Railroad and Truck Noise (§§17-18) 15/ | Treatment Works Grants (§§201-204) 5 / 21 / | Areawide Plans (§208) 2 / 22 / | Water Quality Standards (§303) 23 / | Non-Point Source Regulations (§304) 24 / | Effluent Limitation (§§301, 302, 306, 307) 25 / | Lake Pollution (§314) 26 / | NPDES Permits (§§401-405) 27 / | Planning and Project Grants (§§207-208) 5 / 17 / | Disposal Guidelines (§209) 2 / 18 / | (§1412) | |
| | | Condition re Growth Connections | Location of Sewage Plant | X | Septic Tank Groundwater | Sewage Plant | | Municipal Plant Conditions 27 / | X | X | (X) | FHA Projects |
| | | | | | Parking Lots | | | X | X | X | | |
| | | | X | X | X | X | | X | | 19 / | | |
| | | X | X | X | X | X | | | X | 19 / | | |
| | | | X | X | X | X | X | X | X | 19 / | (X) | (X) |
| | | | | | Pesticide Runoff | | | | | | | |
| | | | X | X | X | X | X | X | | Animal Waste | | (X) |
| | | | X | X | X | | | | | X | | |
| | | | | X | Septic Tanks Groundwater | | Boats, Marinas Sewage | | | | | |
| | | | | | Leaching | X | X | | | Permit Conditions for Federal Lands | | Mining Permits |
| | | | | X | Leaching | X | X | | | Permit Conditions for Federal Lands | | Mining Permits |
| | | | | | Clear Cutting | Products Processing | Control. Cutting | | | Permit Conditions for Federal Lands | | Timber Permits |
| X | | | | | Petroleum Residue | | | | | | | X |
| | X | | | | Petroleum Residue | | | | | | | X |
| | X | | | | Petroleum Residue | | | | | | | |
| | | | | Thermal Discharge | | Thermal Discharge | Thermal Discharge | Thermal Discharge | | Flyash 19 / | | Hydro & Nuclear Licenses |
| | | | X | | | | X | | | | | Hydro License Corps Permit |
| | | Conditions X | X | X | | X | X | 27 / | X | X | (X) | Federal Grant NPDES Permits |

## FOOTNOTES TO EPA PROGRAM MATRIX

1/ Pursuant to the Sierra Club v. Ruckelshaus case, (supra, p. 29, note 14), Clean Air Act programs must be designed to prevent "significant deterioration" of air quality in areas where air quality meets or is better than national ambient air quality standards.

2/ See pp. 28-32.

3/ See pp. 50-60.

4/ See pp. 32-34.

5/ Grant programs may be designed to impose conditions on grants requiring the recipient to undertake some form of land use planning in using grant funds. Grant funds might be withheld if the grantee does not have sufficient authority to implement and enforce plans. Conditions could take the form of limitations on population density in an area served by a plant built with a grant or the establishment of minimum criteria which planning programs must meet to quality for planning or implementation grants.

6/ The size and density of residential development will be a substantial determinant of the impact of EPA regulations on such development. The construction of a few single family residences is not likely to result in any serious pollution problems unless they are not attached to a sanitary sewer system. If there is no attachment to a sewage system, sewage disposal may be taken care of by septic tank systems which if not located or designed properly can substantially affect groundwater supplies. On the other hand, large sprawling suburban subdivisions can place substantial burdens on municipal or privately-owned waste treatment plants and can be significant non-point sources of water pollution. Such developments, as with high density developments such as high-rise apartments, can also generate considerable motor vehicle traffic with air quality problems not normally associated with smaller low-density developments.

7/ Developments generating substantial solid waste may choose between incinerating the waste and having the waste transported away to an appropriate disposal site or facility.

8/ Blasting and excavation operations may create severe dust problems which may lead to regulations dealing with whether and how stripping operations will be allowed to continue. Dust combined with exhausts from hauling and excavating equipment may present serious air quality problems.

9/ The national airport system plan developed under the Airport and Airways Development Act of 1970 may be approved by the Secretary of Transportation only after consultation with and consideration of the views and recommendations of EPA respecting protection of environmental quality which recommendations "to the extent ... feasible" should be made part of the plan

(49 U.S.C.A. §1712(f)). Individual project applications can be approved only if written assurance is given that applicable air and water quality standards will be complied with in the construction and operation of the project (49 U.S.C.A. §1716(e)(1)).

10/ Air quality standards for emissions of particulate matter or sulfur oxides from fossil-fueled generating plants coupled with the mandate that EPA not approve State implementation plans allowing significant deterioration of air quality may have the effect of requiring construction of smaller, less economical generating plants, encouraging construction of nuclear or hydro-electric plants and research into other forms of electricity generation, or the location of generating plants at points far from the demand for the power to be generated.

11/ See pp. 122 _et seq_.

12/ See p. 122.

Implementation of programs to protect against levels of noise which may be injurious to health and welfare may require setbacks, buffer zones, relocation of high noise emitters, tree planting or other noise reduction techniques which may affect what land is used. Standards developed under §5 of the Noise Act are not mandatory enforceable standards states or EPA is required to implement.

13/ Where development may generate substantial truck or railroad traffic, guidelines may be advisable to control routing of such traffic, location and construction standards of loading facilities, and the used buffer zones or other noise reducing measures.

14/ See pp. 124-127.

15/ See pp. 127-128.

16/ See pp. 128-133.

This Act will affect use of land subject to control of state and local governments only to the extent a state chooses to seek federal funds under the Act or otherwise chooses to undertake and implement the §209 planning program. However, executive agencies of the Federal government conducting activities generating solid waste or having jurisdiction over any land or facilities which may be used for or become involved with solid waste disposal activities must take steps to insure compliance with §209 guidelines.

17/ See pp. 129-131.

18/ See pp. 131-133.

19/ Hazardous wastes, including spent nuclear fuel, may be subject to special guidelines requiring disposal only at landfill sites with particular geological conditions. This could influence the location of industries generating hazardous wastes in areas where appropriate landfills are located.

20/ See pp. 61 *et seq*.

21/ See pp. 64-73.

22/ See pp. 73-87.

23/ See pp. 87-104

24/ See pp. 83-85, 100-104.

Any development may be a non-point source of pollution during construction or after completion depending in part on the size of the development. Construction of a single family residence apart from a larger development can be a non-point source if care is not taken during the construction process to avoid runoff from the facility being constructed or the exposed soil. The problem can vary greatly depending on, among other things, the size of the development, the geology and slope of the land and its ability to absorb water, and the extent to which artificial structures will cover the soil.

25/ See pp. 87-104.

26/ See pp. 104-109.

27/ See pp. 109-119.

Municipal waste plants must receive permits from EPA under §402 of the FWPCA for the discharge of pollutants into any navigable waterway which may be subject to such conditions deemed necessary by EPA to carry out the provisions of the Act. Under §402(h) of the FWPCA, EPA has authority to sue to restrict or prohibit any further connections to municipal sewage treatment plants where any condition in a permit for discharges from the plant is being violated.

28/ See pp. 120-121.

# CHAPTER VIII

# EXISTING COORDINATION METHODS

## A. The Need for Coordination

Many of EPA's programs follow a similar structural pattern. National standards are set. Then the states and their subdivisions adopt plans designed to implement the standards. However, the federal legislation contains no specific requirement that these state plans consider more than a single environmental problem. State implementation plans under the Clean Air Act are not explicitly required to promote clean water, and so forth.

The problems caused by single-media planning are not terribly significant as long as the control methods are technological in nature. While some pollution control technologies do generate new pollutants in another media, and the disposal of such pollutants can constitute a real problem, these problems are not of overwhelming magnitude in relation to environmental problems generally. However, when land use controls are used by state and local entities in the implementation of pollution standards more serious conflicts are presented. A land use plan designed to achieve clean air may produce growth patterns which have adverse consequences for water, noise or solid waste disposal.

Moreover, the requirement and preparation of plans in and of itself may not mean environmental quality which plans are designed to achieve will be attained. Different plans mean different things, especially if produced by different agencies, or groups of agencies. Plans are not necessarily compatable, and may lead to altogether inconsistent results. Indeed, it is not impossible that assumptions about what is being done in a "planning" process are entirely erroneous, and those charged with implementation may be lulled into a false sense of security. Clearly some method is needed to coordinate these planning processes to promote optimal achievement of all environmental goals.

The need to coordinate government programs is widely recognized but not easily accomplished. A number of systems for coordinating various programs having an impact on land use and environmental conditions have been advocated or instituted in recent years. Each of these may be of some benefit in assisting the states to coordinate their environmental programs.

## B. National Environmental Policy Act

The National Environmental Policy Act of 1969 requires consideration of a variety of environmental factors by means of an environmental impact statement to be filed by federal agencies with the Council on Environmental Quality for all "major action" affecting the environment.[1] These major actions include proposed legislation, regulations, procedures, policy determinations, and proposed projects expected to significantly affect the quality of the environment. Section 102(2)(c) provides that an environmental impact statement include:

1. a detailed description of the proposed action;
2. a discussion of direct and indirect effects on the environment that might result from the action;
3. identification of unavoidable adverse environmental effects;
4. an assessment of feasible alternatives to the proposed action;
5. a description of cumulative and long-term effects of the action on the earth's resources;
6. identification of any irreversible commitment of resources that might result from the action.

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[1] Guidelines published in August of 1973 (38 Fed. Reg. 20549, August 1, 1973) clearly indicate the all-encompassing interpretation which CEQ has placed on "major" pursuant to the 1971 federal court decision in Morningside-Lenox Park Association v. Volpe, 334 F. Supp. 132 (N.D. Ga. 1971).

The Act also requires that the responsible federal official (usually the agency involved) shall consult with and obtain the comments of any federal agency having jurisdiction by law or special expertise with respect to any governmental impact involved. Thereafter, copies of such statements, with comments of appropriate federal, state and local agencies, are sent to the CEQ and made available to the general public.

Since its conception in 1969, NEPA, largely through the environmental impact statement, has accomplished a good deal. As a result of NEPA impact statements, as noted in the recent report of the Task Force on Land Use and Urban Growth a new community in Illinois was redesigned to preserve an 800 acre hardwood forest; a highway in Georgia was realigned to avoid harm to a lake; a flood protection project in California was modified to preserve a wildlife habitat; a proposed dam in Kentucky was moved several miles downstream to preserve the scenic area.[3]

As a result of impact statements, community and national environmental groups have achieved greater access to the courts, and dozens of successful law suits instituted by such groups have served to strengthen NEPA as a whole. The fact that federal agencies have been forced to consider environmental concerns along with other project goals has resulted in a newly-broadened view of the interrelationship of environmental factors.

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[3] Citizens' Advisory Committee on Environmental Quality, Task Force on Urban Growth, The Use of Land: A Citizens' Policy Guide to Urban Growth, 197-198 (1973).

Moreover, comments by the public and other agencies, formerly given little attention, must now accompany the impact statement to the Council on Environmental Quality. This publicity often results in a higher standard of conduct for agencies involved in the development process. In the words of the Task Force Report, the agency cannot discharge its responsibilities "simply by establishing a set of unvarying minimum standards. It must consider a broad spectrum of public objectives and respond to the alternatives available in each particular situation.[4]

Some actions taken by states to implement EPA programs require the filing of an environmental impact statement under NEPA. Specifically, the construction of municipal sewage treatment plants under EPA grants require the filing of such a statement as does the issuance of a discharge permit under the National Pollutant Discharge Elimination System.[5] To the extent that this requirement is anticipated in the planning process potential environmental conflicts may be avoided.

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[4] *Id*. at 198-199.

[5] Water Pollution Control Act §511(c)(1).

## C. The A-95 Clearinghouse Process

The coordination of environmental planning might be achieved if it could be brought together under the umbrella of an overall regional planning process. Although regional planning has been discussed for many years the first serious attempt to promote it on a national scale came in the 1960's with the advent of a federally-sponsored system of planning for metropolitan areas.

The Intergovernmental Cooperation Act of 1968 directs the President to establish rules and regulations governing the formulation, evaluation and review of federal programs and projects having a "significant impact on area and community development. . . . ."[6] In addition, the Demonstration Cities and Metropolitan Development Act of 1966 requires that metropolitan areawide review bodies be established to provide advisory reviews of local grant-in-aid applications to the federal government for some 35 programs covering physical development.[7]

In response to these two pieces of legislation the Office of Management and Budget promulgated Circular Number A-95.[8] By its provisions, applicants for most federal grants must notify the appropriate planning agency (state, regional or metropolitan -- the designation of which must have federal approval) and permit that agency to comment on the project for which funds are sought. The planning agency must be notified of the applicant's intent to apply "at the earliest feasible time." The notice must contain a description of the project and its location, an estimated date by which a formal application to a federal agency for funds will be made, and a brief statement of whether an environmental impact statement will be necessary.

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[6] Pub. Law 90-577, Oct. 16, 1968, §401(a); 82 Stat. 1103; 42 U.S.C.A. §4231(a).

[7] Pub. L. 89-754, Nov. 3, 1966, §204; 80 Stat. 1262; 42 U.S.C.A. §3334.

[8] O.M.B. Circular A-95, July 24, 1969, as amended.

Circular A-95 requires the planning agency to make recommendations "for the purpose of assuring maximum consistency of such project with state, regional, and local comprehensive plans." The agency is also directed to comment on the project's relationship to certain specific objectives:

1. Appropriate land use for housing, commercial, industrial, governmental, institutional and other purposes;
2. Wise development and conservation of natural resources, including land, water, minerals, wildlife and others;
3. Balanced transportation systems, including highway, air, water, pedestrian, mass transit, and other modes for the movement of people and goods;
4. Adequate outdoor recreation and open space;

5. Protection of areas of unique natural beauty, historical and scientific interests;

6. Properly planned community facilities including utilities for the supply of power, water, and communications for the safe disposal of wastes, and for other purposes; and

7. Concern for high standards of design.[9]

The Clearinghouse agency has thirty days in which to inform the other local governmental units which may be affected by the proposed project, and, if necessary, to consult with the applicant, and, if needed, an additional thirty days to comment.

The A-95 review process has been able to provide a strengthened communications network among local units of government and between the various levels of government. Clearly, the process can be used to inform local governments of the availability and potential of the various programs. Technical expertise is also generally available in the Clearinghouse to aid local government units, and the A-95 process provides a useful vehicle for the attachment of state, local and public comments to environmental impact statements under NEPA.

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[9] *Ibid*. These objectives appear in §401(a) of the Intergovernmental Cooperation Act of 1968. *Supra*, note 6, p. 171.

## D. Integrated Grant Administration (IGA) Program

The OMB has recently (January, 1972) begun the broad use of an Integrated Grant Administration program, by which two or more federal agencies work together in meeting several interrelated requirements for an applicant's program of assistance.[10] The purposes of the IGA program, as recently set forth in an OMB memorandum, are:

> (1) to provide a means to State and local governments to use Federal assistance more effectively and efficiently, and to adapt that assistance more readily to their particular needs through the wider use of projects drawing upon resources available from more than one federal agency program or appropriation; and
>
> (2) to encourage Federal State arrangements under which local governments and other public or private organizations and agencies may more effectively and efficiently combine State and Federal resources in support of projects of common interest to the governments, agencies and organizations concerned, [11]

Federal regional councils are to assist applicants in obtaining grant support from the various federal programs by means of a single application. A mechanism is provided for integrating funding through a single "lead agency," which is usually the one whose expertise and funds will be most required. The funding and application process is to be made more uniform in order to minimize administrative differences among the federal grant programs so that the programs do not "frustrate those applicants who choose to address their problems on an areawide and coordinated basis."[12]

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[10] The IGA program is essentially an extension or substitute for joint funding legislation which Congress has not yet passed although it has been introduced several years running. See S. 2299, 93d Cong., 1st Sess. (1973). The purpose, goals and objectives of the legislation are identical to the IGA program.

[11] OMB Executive Summary Memorandum, dated 7/23/73 at p. 2.

During the past two years, IGA programs have been going forward in 26 pilot projects ranging from Indian governing bodies through regional planning organizations in metropolitan cities, counties and states. Almost all the 26 projects have been funded, and the list will be expanded to 65 projects in the next fiscal year. Since January 14, 1972, an Interagency System Group, including representatives from federal regional councils, states, and public interest groups, has jointly assessed the administration of the program. It found that

1. IGA concepts and principles are sound.
2. Barring certain minor exceptions the procedures used to initiate and implement the IGA systems are sound.
3. The program reduces the applicant's administrative time in all phases of this program.

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[12] *Ibid*.

4. The applicant has a chance to engage in integrated planning, synchronizing the use of resources and eliminating the duplication and overlapping of functions.
5. Provides each participating grantee an opportunity to develop an areawide strategy to address several requirements in a single integrated work program.
6. Provides federal agencies the opportunity to coordinate their participation in a mutually reenforcing way to solve key problems and provide needed services in partnership with state and local governments. [13]

The primary means for providing the funds is by a letter of credit, whereby the lead federal agency places funds from a consolidated working fund in a local bank which can be drawn by a grantee.

To qualify to act as one of these lead agencies EPA must be able to use the letter of credit method of making grants. It is expected the EPA will be fully qualified to act as a lead agency within the next couple of months. Participation in the IGA program will enable EPA to provide a common funding mechanism for states that wish to coordinate the operation of their various environmental programs as well as other related programs. The integration of the management and budgeting processes of the various programs should be of significant assistance in achieving program goals.

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[13] *Id*. at pp. 5-6.

### E. Limitations of Existing Methods.

The existing methods of coordinating federal programs, all of which are of recent origin, demonstrate a growing recognition of the need for better coordination. All the methods seem to have produced real improvement. However, for land use problems generated by conflicting programs, none of the existing methods provides a completely satisfactory solution.

For all its advantages and successes, the National Environmental Policy Act requires only that conflicts between environmental and other goals be noted and given consideration. There is no mechanism within the Act for the resolution of such a conflict should it surface. Moreover, NEPA applies only to a limited class of federal or federally-supported activities and does not apply to many state, regional or local activities which have a substantial impact on land use.[14]

Even more important, the timing of a release of an environmental impact statement, the effectiveness of which is largely dependent upon publicity, may hinder its effectiveness. The statement need not be released until after the final decision making process with respect to a particular project is well under way. But land use planning must be undertaken at a much earlier stage to prove effective.

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[14] A few states have adopted programs similar to NEPA requiring environmental impact statements with regard to many state and local activities which involve state or local governmental decisions or other actions. See, *e.g.*, California Environmental Quality Act of 1970, California Public Resources Code, §21000 *et seq*.

The A-95 Clearinghouse process, while requiring a mandatory review, also does not provide for a reconciliation of conflicts. The A-95 process generally looks to a comprehensive plan as the basis for its review -- and often there is none, or its quality is dubious. In addition, the process applies only to a limited number of projects and has no direct effect whatsoever on implementation of many of the various EPA programs. Moreover, if the Clearinghouse is a Council of Governments or other body in part dependent upon the funds of the local government units whose projects it is supposed to review for its very existence, this dependence makes an unbiased resolution or coordination of these conflicts very difficult.

The Integrated Grant Administration Program is too new to be definitively evaluated. One recent commentator has suggested that in the first 18 months "the process has shown few significant achievements." [15]

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[15] Clark, New Federalism Report/Tulsa Agreement Demonstrates Attempts to Coordinate Grant Programs, 5 National Journal Reports, No. 39, Sept. 29, 1973, at 1443.

The process is being undertaken primarily by management and budget officials, and is not designed to promote resolution between conflicting program goals.

# CHAPTER IX

# COORDINATED ENVIRONMENTAL PLANNING

## A. The Goal

EPA was created to bring together the nation's various environmental programs under a common umbrella. Pursuant to EPA's programs, many states and their subdivisions are promulgating plans and undertaking enforcement strategies which have or will have a major impact on the use of land. However, each plan or strategy is typically designed to achieve a single environmental goal rather than the optimal achievement of all environmental goals.

In order to prevent conflict and avoid duplication among the whole range of federal, state and local environmental programs, a system of coordinated environmental planning should be applied to the whole panoply of environmental plans, decisions and regulations of state, regional and local governments which impact the use of land. State, regional and local systems for controlling development must be coordinated with the relevant federal mandates in a manner which best achieves the national environmental goals.

Various program branches of the EPA and its predecessors have sought the advice of a number of consultants in recent years on the land use impact of particular EPA programs. These consultants, with remarkable unanimity, have recommended greater coordination of the methods for determining the proper use of land. All agree that some measure of coordination will be necessary if the particular issue or issues to which this report is addressed are to be solved, not only within and between federal agencies and programs, but also with local and state governments.

The University of North Carolina's Center for Urban and Regional Studies studied methods of implementing environmental goals in local planning and decision making. They concluded that a system for combining isolated methods and tools into a single coordinated planning process was needed, but that "some form of intergovernmental framework" was also needed to guide local planning.[1]

The Rutgers air quality study, not yet completed, focuses on NEPA and the A-95 Review process, both discussed in more detail below. The report faults NEPA procedures for releasing impact statements too late to affect the state and local decision making process. With respect to the A-95 Clearinghouse process, it observes that if the reviewing agency is a Council of Governments -- and it often is -- it may be difficult for it to perform an unbiased review of those projects of its component units, especially as the COG relies on such units for its own financing. The report sees a need for broader programs of state and regional environmental management.

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[1] E. J. Kaiser, et al., "Promoting Environmental Quality Through Urban Planning and Controls" 405 (U. of No. Carolina Center for Urban and Regional Studies, 1973).

Argonne National Laboratory, in a report published in March of 1972, focused on the need for EPA to supplement its role in coordinating federal environmental programs by encouraging local and state governments to engage in similar coordination. It went on to advocate the merging of procedures and practices of groups and agencies in environmental and land use programs and the integration of land use and environmental factors as well as socio-economic standards in transportation and other infrastructure plans.[2]

This view is echoed in a recent (1973) paper prepared for EPA's air programs branch by Daniel R. Mandelker and Susan B. Rothschild. They point out that encouraging greater coordination among federal, state and local environmental and land use control programs will not be sufficient if some method for resolving conflicts with federal mandates is not provided as well.[3]

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[2] Argonne National Laboratory, "The Relationship Between Land Use and Environmental Protection," March, 1972.

[3] Mandelker & Rothschild, "The Role of Land Use Controls in Combatting Air Pollution Under the Clean Air Act of 1970."

Another study, prepared by Alan M. Voorhees & Associates, Inc., for EPA's Office of Air Programs in 1971, concentrated on the implementation of air pollution programs. The consultants noted the lack of established procedures for incorporating air pollution controls into local plan-making.[4]

It is becoming increasingly important for EPA to give serious attention to coordination of its own and other land use control programs. Public pressure is mounting as the courts force EPA into increasingly rigid enforcement of single-purpose goals. Unless methods are found for optimizing land use decisions in light of all valid goals public pressure could cause EPA's basic statutes to be weakened.

This report, as well as those of the other consultants, describes in general terms a goal toward which EPA should strive -- a system of coordinated environmental planning by the states and their subdivisions which would ensure that land use decisions are made in a manner providing the maximum possible achievement of EPA goals.

We have pointed out that recent efforts to coordinate government programs, while producing some significant benefits, all fall short of the desired goal. We will next examine the possible ways in which EPA can take the lead in encouraging the states to undertake an effective system of coordinated environmental planning.

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[4] Alan M. Voorhees & Associates, Inc., "A Guide for Reducing Air Pollution Through Urban Programs."

## B. Consolidated EPA Grants

EPA has considered the adoption of a "Consolidated Grants Program" requiring only one grant application and administrative mechanism for the funding of personnel and facilities used for a program involving two or more media. The objective of the program would be to simplify grant administration by requiring only one grant application and one administrative mechanism for the funding of personnel. A recent EPA memorandum puts particular emphasis on the joint use of facilities and personnel on various programs. For example, a single laboratory facility and group of inspectors could perform services for all three media.[5]

In 1973 there were four states participating in a test of the consolidated grants program -- New York, Washington, Utah and Hawaii. Apparently the participating states are satisfied with the results. The Governor of Washington has been publicly quoted as saying, "For every hundred strings attached before, we have clipped fifty of them with the Consolidated Grant."[6] The New York State Department of Environmental Conservation is reported to have estimated saving over $200,000 from the Consolidated Grant Program. Ten additional states are expected to be added to the existing program this fiscal year.

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[5] Intermedia Strategy Paper, Ch. VI at p. 9.

Once the program is established EPA will be in a better position to encourage the states to evaluate intermedia impacts within their own programs and coordinate planning and regulation within the state. EPA could offer assistance to the states and local authorities by publishing a series of guidelines and reports to which the states and regional and local governments could refer in the coordination of the various EPA programs and other federal, state, regional and local programs and plans.

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[6] Id., at p. 8

The purpose behind the creation of EPA was to bring together the major environmental programs in a coordinated manner.[7] Given the purpose for which EPA was created, and the broad responsibilities given it by Congress,[8] it is clearly within the Agency's power to encourage the states to undertake their own programs of coordinated environmental planning and regulation.[9]

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[7] See testimony of Roy Ash, supra, at p. 8.

[8] The Water Pollution Control Act recognizes that EPA has broad responsibilities to undertake comprehensive programs to control pollution over and above the agency's specific program responsibilities:

> The Administrator shall, after careful investigation, and in cooperation with other Federal agencies, State Water Pollution Control agencies, interstate agencies, and the municipalities and industries involved, prepare or develop comprehensive programs for preventing, reducing, or eliminating the pollution of the navigable waters and ground waters and improving the sanitary condition of surface and underground waters.

See also, 40 C.F.R. §130.10(e), 38 Fed. Reg. 8034 (March 27, 1973). The Clean Air Act also directs EPA to encourage "cooperative activities by the States and local governments for the prevention and control of air pollution" and appropriate state laws and compacts relating to the control of air pollution. (§102(a)).

[9] A recent study of EPA released by Argonne National Laboratory suggests such an "increase in pressure"

EPA could publish regulations, guidelines and reports encouraging the states to undertake systems of coordinating land use planning and regulation with environmental control programs. It could encourage research and planning activities which would work toward this goal.

Could EPA go further? Could it require such coordination as a condition of approving state plans under the Clean Air Act or Water Pollution Control Act? It can be argued that a plan which lacks such coordination will not promote the land use decisions that will best achieve the statutory goals. But the legislative history contains little indication that Congress envisioned an intermedia approach. A final conclusion about EPA's authority to require coordinated environmental planning should probably await further and more detailed examination of potential methods of coordinating development regulation.

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should be a goal. ("The Relationship Between Land Use and Environmental Protection," Croke, Croke, Kennedy & Hoover [March, 1972].) Two other commentators have listed the lack of such encouragement as a major failing of EPA. (Mandelker & Rothschild, supra, note 3 at p. 182.)

## C. National Land Use Policy Legislation

A bill which would give EPA an opportunity to encourage states to coordinate their environmental planning with other state land use planning programs is S.268, the Senate-passed Land Use Policy and Planning Assistance Act of 1973[10]

The bill provides grants to the states for the development of a state land use planning process and its implementation through a state-wide land use program which must assure that:

1. The use and development of land in areas of critical environmental concern within the state is not inconsistent with the land use program;

2. The use of land in areas within the state which are or may be impacted by key facilities is not inconsistent with the state land use program;

3. Any large-scale subdivisions and other proposed large-scale development within the state of more than local significance in its impact upon the environment is not inconsistent with the state land use program.

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[10] H.R. 10294, the House Interior Committee's version entitled "The Land Use Planning Act of 1973," has been reported out of that committee but has been blocked in the House Rules Committee as of the date of this report.

By means of a National Advisory Board of Land Use Policy, further review of potentially conflicting policies is provided. The Board will consist of representatives from a number of departments - Interior, Agriculture, Commerce, Defense, HEW, HUD, DOT, and Treasury - and the Atomic Energy Commission, Federal Power Commission, Council on Environmental Quality and EPA. The Act is explicit in directing the Board to assist in the development of consistent land use policies.

The Department of the Interior will administer the program, but EPA has an important role in the Land Use Policy and Planning Assistance Act as passed by the Senate. First, under Section 203, a state's continued eligibility for grants to implement the Act depends upon the development of an adequate state land use program which must include methods of implementation for (according to Subsection (3)(F)):

> Assuring that (i) any source of air, water, noise, or other pollution pertaining to the areas and development activities listed in this clause (3) will not be located where it will result in a violation of any applicable

> air, water, noise or other pollution standard or implementation plan, (ii) any developmental activities in combination with pollution sources will not cause such violations to occur, and (iii) the program is consistent with the goals, policies, objectives, standards and other requirements of the Federal Water Pollution Control Act, the Clean Air Act and other Federal laws controlling pollution;

Section 306(b)(2) provides that the Secretary of the Interior shall not make a grant to any state until the Administrator of EPA is satisfied:

> that the State land use program of such State is not incompatible with the Federal Water Pollution Control Act, the Clean Air Act and other federal laws controlling pollution which fall within the jursidiction of the Administrator and that those portions of the State land use program which will effect any change in land use within the next annual review period are in compliance with the standards, criteria, emission or effluent limitations, monitoring requirements, or other implementation plans required by such laws.

As the Senate Report of the Committee on Interior and Insular Affairs makes clear, the Act contains these provisions to ensure the compatibility of a state land use program with the Clean Air and Water Pollution Control Acts and other federal environmental legislation.[11]

The sponsor of this language explained on the Senate floor that it was added:

> to assure that the results of concentrations of people and vehicles at such developments are anticipated and planned for in overall programs. This provision assures that the land use program is supportive of and in no way infringes upon these planning activities [of the EPA and the States implementing their plans]. The addition of this provision will also assure that the land use program is consistent with the goals, policies, objectives, standards and other requirements of the Federal Water Pollution Control Act, the Clean Air Act, and other federal laws controlling pollution.[12]

The Senate Report also emphasizes the importance which the Senate attaches to the Administrator's review of the state land use plan under the Act, not only with respect to the provisions of the Water Pollution Control, Clean Air and

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11/ Senate Report of the Committee on Interior and Insular Affairs, "Land Policy and Planning Assistance Act" 63 (June 7, 1973).

12/ 119 Cong. Rec. S11535 (June 20, 1973) As the Senate debate of June 20, 1973 clearly indicates, a modification of a preceding section, 203(a) paragraph 3, Clause F, was specifically amended to broaden coverage from a showing that sources of air, water, noise and other pollution do not violate applicable pollution requirements and to also assure that new developmental activities do not create violations of the Pollution Control laws.

other environmental acts, but also those portions of the state land use program which will affect any change in land use and their effect upon the standards, criteria, emission or effluent limitations contained in any plan which the states developed in response to the aforementioned Federal anti-pollution acts.

The Congressional intent to provide some coordination between environmental goals and other federal goals is apparent both from the above language and the makeup of the National Advisory Board on Land Use Policy. The National Land Use Policy and Planning Assistance Act is therefore meant to proceed in tandem with the anti-pollution laws which are the responsibility of EPA to administer and enforce, not to pre-empt any of the programs or state implementation plans thereunder.

EPA could reasonably take the position that it is unable to properly evaluate the effect of the state's land use program on the federal laws controlling pollution unless the state establishes a system for coordinating land use planning and the environmental planning undertaken pursuant to the various EPA programs with the land use program established pursuant to the Land Use Policy Act. The lead times provided in the various drafts of the land use policy legislation would give the states adequate time to work out an effective system of coordination. EPA could also use this time period to develop more fully the standards it wants states to achieve.

Such a policy would in no way infringe on the responsibilities of the Department of the Interior to administer the land use program; on the contrary, it would greatly strengthen Interior's land use program if the land use aspects of the state's air and water plans were coordinated with the land use program.

### D. Conclusion

In summary, a need exists to coordinate various environmental plans and regulations affecting land use. The search for such a coordinating function is not new. The National Environmental Policy Act, the A-95 Clearinghouse process, the EPA Consolidated State Grant Program, and the OMB Integrated Grant Administration program all represent recent attempts to provide such coordination for a variety of government programs. All have had a measure of success, but it is not clear that the coordinating function has yet been achieved.

The responsibility to encourage such coordination is clearly on the shoulders of EPA. The separate state environmental planning programs are typical of the type of fragmented programs that are, in Roy Ash's words,

> . . . characteristic of organizational responses to problems that were first perceived independently. Such piecemeal organizational structure becomes inadequate when the interrelation of the problem or the solution becomes the dominant factor. [13]

EPA has the responsibility and the authority to encourage the states to coordinate their environmental planning to avoid contradictory land use implications. Passage of S.268 in its present form would enable EPA to ensure that the environmental planning was also coordinated with other state land use programs.

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[13] See, Hearing on Reorganization Plan No. 3 of 1970, before a subcommittee of the House Committee on Government Operations, 91st Congress, 2nd Session, page 45 (1970).